GARRISON FOREST SCHOOL

300 GARRISON FOREST ROAD • OWINGS MILLS, MARYLAND 21117

UPPER SCHOOL CURRICULUM GUIDE 2018-2019

GARRISON FOREST SCHOOL'S MISSION AND PHILOSOPHY

At Garrison Forest School, we prepare our students in and out of the classroom to thrive in a complex, changing world by

- Challenging them to strive for academic excellence and to grow into informed, independent and creative thinkers;
- Cultivating an authentic and resilient sense of self, grounded in respect and integrity;
- Creating a diverse and inclusive community built on a spirit of caring;
- Inspiring young women to lead and to serve with passion, purpose and joy.

Our motto informs our mission: *Esse Quam Videri*—"To Be Rather Than To Seem."

STATEMENT OF RESPECT

The Garrison Forest School community is deeply committed to equity, honesty, kindness and respect as part of the educational experience. To this end, we

- Celebrate diversity both within our community and our curriculum;
- Support the well-being of all people;
- Build the self-esteem of all people;
- Promote understanding among all people.

We recognize the dignity and worth of all individuals. To protect their rights, we confront bias, prejudice and discrimination. Garrison Forest does not condone any behavior which is inconsistent with these tenets. We believe that it is unacceptable for our spoken and written language and behavior to demean anyone's physical characteristics, as well as anyone's ethnic, gender, personal, racial, religious or sexual identities. We, as individuals, must take responsibility for our words and deeds and respect all people.

GARRISON FOREST'S SCOPE OF PROGRAMS

Garrison Forest School offers an exceptional elementary, middle and high school program for girls, beginning in Kindergarten. For grades 8-12, Garrison Forest also has a regional, national and international boarding program. The coed Preschool begins with a Parent-Toddler program and has classes for two-, three-, and four-year-old boys and girls. For more information about the Preschool, Lower School, Middle School, Upper School or boarding programs, please visit www.gfs.org or contact the Admission Office at (410) 559-3111.

Table of Contents

THE CURRICULUM

Requirements for Graduation

Garrison Forest Upper School operates on a semester system. One credit is given for a full-year course; semester courses earn one-half (½) credit.

General Requirements:

- A minimum of 21 credits is required for graduation.
- In general, students take at least 5 academic credits each semester. In grade 9, students generally carry 6 academic credits. In grade 10, students generally carry 5 ½ to 6 academic credits. In grades 11 and 12, students carry 5 to 6 academic credits.

Due to the demanding nature of our curriculum, students must be recommended for AP courses (see AP guidelines, p. 9-13) and are limited to two AP courses in the junior year and three AP courses in the senior year. Exceptions are considered by formal request on an individual basis. In order to graduate, seniors must remain in and pass all courses in which they are enrolled at the end of the add/drop period of the semester in which the course begins.

Graduation Requirements:

English: 4 credits

History: 3 credits, one of which must be in World History II and one of which must be in United States History.
Recommendation: Students are encouraged to take 1 or more history electives in addition to their 3 core history courses.

Mathematics: 3 credits in grades 9, 10, and 11 including Algebra I, Geometry, and Algebra II.
Recommendation: Students are strongly urged to take at least one math course each year in grades 9-12.

Science: 3 credits of laboratory science. Credits must include one biological, one chemical, and one physical science, one of which must be in grades 11 or 12.
Recommendation: Students are encouraged to complete Biology, Chemistry, and Physics before signing up for an advanced elective.

World Language: 3 credits* in one language through Level III. For those students electing a second language, at least 2 credits must be completed.
Recommendation: Language students who complete 3 credits at the end of grade 10 are recommended to continue at least one language in grade 11.
**International students for whom English is not their first language are exempt from this*

requirement, but may elect to take World Language courses.

The Arts: 2 credits including 1 credit of Art Foundations in grade 9. For student entering Garrison Forest School after grade 9, both Performing and Visual Arts must be represented in the Arts credits.

Physical Education: 6 points before the conclusion of junior year, equivalent to 1 credit

Digital Thinking: Non-credit; required in grade 9

Dialogue & Debate: Non-credit, required in grade 9.

Decision Making: Non-credit, required in grades 9 and 11.

SAT Prep/Career Explorations Unit: Non-credit, required in grade 10.

Transitions: Non-credit, required in grade 12.

Course Load Exceptions

Students seeking to enroll in a course overload (more than 6 courses, or more than the maximum number of AP classes) must submit a formal written request for permission, which may or may not be granted. Key considerations for whether than request may be approved include:

- a clear rationale for how the proposed courses fit into the student's long-range interests and goals;
- evidence that the student has been consistently demonstrating the need for academic challenge beyond the normal course load;
- regular attendance and consistency in meeting academic, personal, and co-curricular obligations in a timely way.

Students requesting a reduction in the normal course load must discuss their specific needs with their advisor and the Dean of Academic Development, who may solicit the input of the College Counseling Dept, the School Counselor, and the Head of Upper School to gauge the appropriateness of the request and the long range implications for the student's program. Possible rationales for reduced course load are:

- Language-Based Learning Disability qualifying for a foreign language waiver
- Medical limitations

Documentation is required for all rationales; students must still meet the minimum 21 credits for graduation and complete required coursework, and a 4-Year Plan must be developed and submitted, outlining the proposed trajectory.

COURSE SELECTION SAMPLES

These summaries are designed to help students visualize a few of the many program combinations. Students should work closely with their academic advisors when schedule planning in order to explore all options both to meet their graduation requirements and to include their extracurricular interests.

Grade 9 - Students in grade 9 generally carry 6 academic credits.

Core Courses:	English I	(1 credit)
	Mathematics	(1 credit)
	Language	(1 credit)
	Science	(1 credit)
	Art Foundations	(1 credit)
	Choose one of the following two courses:	
	Second Language	(1 credit)
	History	(1 credit)
	Plus:	
	Physical Education	
	Decision Making	(non-credit)
	Digital Thinking	(non-credit)
	Dialogue & Debate	(non-credit)

Grade 10 - Students in grade 10 generally carry 5 ½ to 6 academic credits.

Core Courses:	English II	(1 credit)
	Mathematics	(1 credit)
	Language	(1 credit)
	History	(1 credit)
	Science	(1 credit)
	And:	
	Electives	(various credits)
	Plus:	
	Physical Education	
	SAT Prep/Career Exploration	(non-credit)

Grade 11 - Students in grade 11 carry 5 ½ to 6 academic credits. Students must complete at least one year of laboratory science in either grade 11 or 12.

Core Courses:	English III	(1 credit)
	Mathematics	(1 credit)
	History	(1 credit)
	Science	(1 credit)
	Language	(1 credit)
	And:	
	Electives	(various credits)
	Plus:	
	Physical Education	
	Decision Making II	(non-credit)

Grade 12 – Students must carry a minimum of 5 full unit courses each semester. Students must complete one year of laboratory science in either grade 11 or 12.

Core Courses:	English IV	(1 credit)
	Mathematics	(1 credit)
	History	(1 credit)
	Language	(1 credit)
	Science	(1 credit)
	And:	

Electives	(various credits)
Plus:	
Transitions	(non-credit)

STE(A)M AT GARRISON FOREST: SCIENCE, TECHNOLOGY, ENGINEERING, (ART), AND MATHEMATICS

Garrison Forest School broke new ground in 2005, partnering with Johns Hopkins University to establish the WISE (Women in Science and Engineering) program, in response to a national call to craft opportunities to engage young women in pathways to STEM (science, technology, engineering, mathematics) fields. Thirteen years into the WISE program, over 30% of each class now is participating in the WISE program, GFS alumnae have pursued STEM majors in college in record numbers, and student and family interest in STEM has expanded.

As interest within GFS in STEM education for all grades has grown, research has demonstrated the pivotal need to engage young women in STEM from the elementary years forward. At the same time, the ongoing underrepresentation of women in STEM, along with critical shortages in the overall STEM-qualified workforce, remain challenges for the United States.

STE(A)M in 2018-2019

In addition to the core courses offered in the Mathematics, Science, and Arts Departments at Garrison Forest School, GFS students may take advantage of electives and program options which provide STEAM-relevant opportunities for hands-on learning, problem solving, creativity, and invention. Courses in the arts develop many of the ways of thinking, intellectual capacities, and skills demanded by STEM subjects. As part of their Art Foundations credit, for example, the Arts Foundations course required of all 9th grade students provides experiences that integrates art and technology. Students with STEAM interest are strongly encouraged to include arts electives among their course selections.

W: Throughout the curriculum, students will find Arts courses and other elective courses that include significant STEAM-related content. These courses are designated in the Curriculum Guide with this icon.

Students with an interest in STEAM also are encouraged to explore the offerings of the One Schoolhouse/Online School for Girls (OSG). See pages 47-50.

The WISE Program is available for juniors and seniors who seek an intensive, experiential STEAM opportunity at Johns Hopkins University. Finally, students are encouraged to explore substantive co-curricular opportunities related to STEAM and the arts that complement their classroom experience.

Curricular STE(A)M options:

Electives in Computer Science, Mathematics, and Science:

- Engineering Design (Grades 10-12)
- Introduction to Computer Programming: Game Design (Grades 10-12)

- Game Design II (Grades 10-12)
- AP Computer Science Principles (Grades 10-12)
- AP Computer Science A* (Grades 10-12)
- Ecology, Evolutionary Biology, and Behavior (Grades 11-12)
- AP Biology (Grades 11-12)
- AP Chemistry (Grades 11-12)
- AP Environmental Science (Grades 11-12)
- Anatomy and Physiology (Grade 12)
- AP Calculus AB and BC
- Advanced Calculus and Linear Algebra
- AP Statistics
- Women in Science and Engineering (WISE) Program (Grades 11-12)
- Biochemistry, Microbiology and Public Health Research (Honors) - Small World Initiative (Grades 11-12)

Arts Department electives, especially:

- Art and Ideas (Grades 10-12)
- Color Theory (Grades 10-12)
- Jewelry (Grades 10-12)
- Photography I and II (Grades 10-12)
- Sculpture I and II (Grades 10-12)
- The Science of Art (Grades 10-12)
- Woodworking: Function and Design (Grades 10-12)

Social Science electives:

- Developmental Psychology (Grades 11-12)
- AP Psychology (Grade 12)
- *Half the Sky*: International Perspectives on Women, Gender, and Health (Grades 10-12)

*Selected courses through the Online School for Girls.

STE(A)M Co-Curricular Activities:

- GREEN Club and other environmental/sustainability activities
- Tiny House Project, designing and building a tiny house at GFS (throughout 2018-2019)
- Robotics Club
- Makerspaces
- Young Engineers and Scientists Seminars (YESS Program; early Fall)
- GFS's annual Maryland STEM Festival program (October/November, program differs each year)
- Annual Hour of Code program (December or early winter)
- Competitions, including the North American Computational Linguistics Olympiad (January)
- Biennial USA Science & Engineering Festival and the X-STEM Symposium (April)
- Mathematics and Science Department-sponsored special activities and competitions
- Service opportunities including participation in GFS tutoring programs, with focus on helping peers with STEM subjects

- In-school field trips and weekend Activity Program opportunities with a STEM focus

THE ADVANCED PLACEMENT PROGRAM

What is the Advanced Placement Program?
The Advanced Placement Program (AP®) enables students to pursue college-level studies while still in high school through enrollment in AP courses. The program is administered by the College Board, which determines the curricular goals and course content for all AP courses. The College Board approves schools that wish to offer AP courses and conducts regular "audits" at schools to assure that AP courses meet requirements. AP courses are rigorous, fast-paced, and require students to master content and skills thoroughly and independently. Based on their performance on rigorous AP Exams offered in May by the College Board, students may earn college credit, advanced placement in college, or both. Each college has its own policy about AP courses and scores. More than 3,600 colleges and universities annually receive AP Exam scores and over 90% of 4-year colleges in the U.S. provide credit and/or advanced placement for qualifying scores. AP exams are graded on a scale of 1 through 5, with a 3 being the minimum grade generally required to support advanced placement in college.

Who should take AP courses?
Since AP courses are college-level courses offered in high school, they are appropriate for students ready to tackle college-level work and who meet certain criteria. At Garrison Forest School, specific academic eligibility requirements have been established for each AP course offered by the School in order to ensure that students in AP courses have the academic preparation necessary for success. In addition, other considerations are weighed by the School in determining placement in AP courses.

Students who meet the academic requirements for placement in an AP course should also:

- be passionate about the subject matter and highly motivated to meet the demands of the course;
- possess excellent academic and study skills, the capacity to work independently, and an exceptional work ethic;
- be highly capable abstract, critical, and independent thinkers;
- be able to balance the demands of AP coursework with other academic and non-academic commitments and goals.

The competitiveness of the college application process, a desire to keep up with classmates, and other factors sometimes contribute to a student's interest in enrollment in an AP course. While such considerations are not necessarily misplaced, they are not in and of themselves sufficient for placement in an AP course. Students are ill-served by placement in demanding courses that do not match their interests or their strengths. The breadth and depth of the Garrison Forest School curriculum is such that many course options, including ones that strongly support college admission, are available to students apart from AP offerings.

Students and parents need to be prepared to be guided by the School's recommendations regarding the appropriateness of AP coursework and weigh multiple factors carefully in assessing best options. Important to note:

- The rigor of AP courses may result in a student achieving a lower grade than what she would earn

in a non-AP course.
- The intensive time-demands of AP courses often stretch even the most gifted and disciplined students, resulting in trade-offs on other fronts, including grades in other courses and time available for other commitments and interests.

Because of the demands of AP coursework, students are counseled to consider these courses carefully and to balance their other course selections accordingly. Our most rigorous curriculum includes 2 APs in the junior year and 3 APs in the senior year. This level of rigor is communicated to colleges as our most challenging. Exceptions to these limits are considered only by formal written request on an individual basis (see p. 5).

The AP Enrollment Process at Garrison Forest School

- Early in their time in the Upper School, students should begin to work with their advisors to develop their year-by-year course plan leading to graduation. Students are encouraged to discuss their interest in AP coursework with their advisors. Students and parents are cautioned, however, that indicating a desire for an AP course on a student's four-year-plan course outline does not guarantee that the student will be recommended for the AP course(s).
- As they move through their sophomore year, students interested in specific subject areas in which AP courses are offered should begin to talk more specifically with their advisors and teachers in those subject areas about their interest. Often, subject teachers can provide students with valuable feedback regarding the student's academic strength in the subject, which students can use in discussion with their advisors about potential AP coursework options.
- Placement in an AP course is granted through departmental recommendation. Departments meet prior to course registration to determine appropriate placements for students for the next academic year. In most instances, students recommended for AP courses are identified at this time. In some instances, the Department may elect to monitor a student's progress in the 4th quarter before making an AP placement recommendation.
- Departments consider a range of factors in determining AP placement, including academic performance to date in the subject and in other relevant disciplines, feedback from teachers, the student's intellectual and personal preparedness for college-level work, the student's commitment and interest in AP-level study, and the student's ability to manage the workload.
- Students who have been recommended for AP placement will be informed by their advisor during the course selection process. Students who have not been recommended, but who have an interest, should speak with the department chair to determine whether the department will consider placement.
- Enrollment in an AP course for the next academic year is contingent upon the student sustaining her academic effort and performance over the full academic year prior to AP enrollment. A department may revoke the AP course placement recommendation of a student who does not maintain overall academic performance, grades and effort consistent with AP course placement.

Expectations regarding AP Course Study

By submitting the completed and signed course selection forms, students admitted to an AP course, along with their parents, indicate their understanding of the AP course expectations before enrollment in the course is finalized. Students and parents must be prepared for:

- Required summer work for the AP course;
- Required assignments and study over breaks;

- Required and recommended special activities, such as weekend field trips, related to the AP course;
- Required high level of independent learning and self-management;
- A course experience that mimics college-level study in content, rigor, pacing, and assessment.

Students are encouraged to work closely with their advisors and teachers to assess whether placement in an AP course is appropriate for them.

AP Course Costs
Taking the College Board's AP® course exam in May is required of all students enrolled in AP courses, and parents will be billed for the College Board's exam fee (approx. $95) for each AP course for which their daughter is registered.

Garrison Forest School AP Guidelines

Department/AP Course	**Year of Eligibility**	**Course Prerequisites**	**Required Grades for *consideration***
Art: *AP Art History (Online only, 2018-2019)*	Senior or Junior year		B+ or higher in English III and US History/AP U.S. History for seniors; B+ or higher in English II and World History II for juniors.
English: *AP English Literature*	Senior year	English III	B+ or higher in English III. B+ or higher English III essay average.
English: *AP Language and Composition Exam*	Junior year		Strong B+ average in concurrent English III course.
History: *AP U.S. History*	Junior year	World History II	B+ or higher in World History II
History: *AP Psychology*	Senior Year	US History or AP U.S. History	B+ or higher in U.S. History or AP U.S. History
World Languages: *AP Chinese Language and Culture*	Junior or Senior year	Chinese IV (H)	B or higher in Chinese IV (H)
World Languages: *AP French Language and Culture*	Junior or Senior year	French IV (H)	B or higher in French IV (H)
World Languages:	Junior or Senior year	Latin III (H) or Latin IV (H)	B+ or higher in Latin III (H) or Latin IV

AP Latin			(H). Success in the transition to reading Latin literature at the Latin III or Latin IV level.
World Languages: *AP Spanish Language and Culture*	Junior or Senior year	Spanish IV (H)	B or higher in Spanish IV (H)
World Languages: *AP Spanish Literature and Culture*	Senior Year	AP Spanish Language and Culture	B or higher in AP Spanish Language and Culture
Mathematics: *AP Calculus AB*	Senior year	Precalculus	B+ or higher test average in Precalculus
Mathematics: *AP Calculus BC*	Senior year or junior year	Honors Precalculus	B+ or higher test average in Honors Precalculus
Mathematics: *AP Statistics*	Junior year or senior year	Precalculus	B+ or higher test average in Precalculus
Science: *AP Biology*	Senior or Junior year	● Biology ● Chemistry ● May take Physics concurrently	● Grade average of B or higher in Biology; ● Grade average of B or higher in Chemistry or B- or higher in Honors Chemistry ● Higher than a 650 SAT II Biology or Chemistry score if not at GFS for Biology or Chemistry or a placement test.
Science: *AP Chemistry*	Senior or Junior year	● Honors Precalculus concurrently or as a junior ● Calculus or higher as a senior ● Chemistry	● B+ or higher in Precalculus; ● A- or higher in Honors Chemistry; ● Test grade average of B+ or higher in Honors Chemistry; ● Test grade average of B+ or higher in Physics, if already taken; ● Higher than a 650 SAT II Chemistry score if not in Honors Chemistry or at GFS for Chemistry.
Science: *AP Environmental Science*	Senior year and Junior year by departmental recommendation	● Biology ● Chemistry ● Algebra II	● B or higher in all previous science classes; ● B or higher average in English III; ● Test grade average of B or higher in Algebra II.

Science/Technology: *AP Computer Science A (Online only, 2018-2019)*	Senior, Junior, or Sophomore year by departmental recommendation.	Algebra II Honors concurrently Intro. to Computer Programming, Digital Game Design, previous programming experience with instructor permission, or the OSG summer course "Preparing for AP Computer Science."	B+ or higher in Precalculus; Test grade average of B+ or higher in Honors Chemistry; Test grade average of B+ or higher in Physics, if already taken; B+ or higher in Algebra II; Previous programming experience
Science/Technology: *AP Computer Science Principles*	Senior, Junior, or Sophomore year by departmental recommendation.	Geometry	B grade or higher in Geometry or Geometry & Trigonometry Honors or B grade or higher in the most recent Math course above the level of Geometry with Algebraic Thinking

ARTS

Requirements and Recommendations:

- Each student is required to complete 2 credits in the arts.
- Both visual and performing arts must be represented in the Arts credits.
- 9th grade students complete a multidisciplinary course in Arts Foundations, laying the groundwork for more advanced courses

Arts Foundations: Grade 9 1 credit, year course

(Required of all ninth graders)

This introductory level course builds fundamental skills and familiarity with key principles across domains in the creative arts. Students complete one semester of Design Lab and one of Performing Arts Fundamentals.

The Design Lab segment of the course puts the student in the role of a designer faced with a variety of creative industry design problems and provides the student with experiences in 2D, 3D, and digital art making. Through experimentation, problem-solving and sequential approaches, students create compositions and constructions with varied materials and techniques. Applying principles of design, the creative projects aim to heighten visual literacy, enhance spatial reasoning, stimulate endless creative possibilities, and generate relevancy to everyday life.

During the Performing Arts Fundamentals segment, students study both Music and Theatre. In Music, students focus on four main projects that will help them to develop musicianship, vocal technique and composition skills. Students are expected to be reflective and think critically as they experience music that may be unfamiliar to them, explore unique qualities of their voice as it supports an ensemble, creatively approach the use of electronic music, and craft a lightly staged musical production that resembles an operetta.

In Theatre, students begin with a focus on public speaking. Students develop an understanding of the elements that allow for effective public speaking and will write and give individual speeches. Students will also be introduced to all elements of theatrical productions. This exploration will be focused around a play which students will read aloud in class. In putting together their own final presentation, students explore script annotation, character analysis, language and themes, performance styles, techniques of theatrical review, and the design elements of set, costumes, lighting, and sound. Students will also have the opportunity to attend a professional production at a local Baltimore theatre company. Performing Arts Fundamentals reinforces essential ninth grade skills while exploring them from a unique musical or theatrical perspective. Studio fee. $25.00

Visual Arts

The Visual Arts faculty is committed to promoting literacy, communication, and imagination in all students, based on their belief that the arts are fundamental to the human experience and to the contemporary world. Our comprehensive art program provides opportunities to foster creative problem-solving, to develop aesthetic judgments, comprehend historical perspectives, explore personal identities, express innovative ideas, and facilitate cognitive, perceptual, and manipulative skills according to individuals' interests and abilities. Not all courses will be offered every year; courses with the largest pre-registration enrollments will be given preference. Please see the Visual Arts chart for sequencing of courses.

***AP Art History** Grade 12 (Grade 11 with permission) 1 credit; year course (online)
Offered through One Schoolhouse/Online School for Girls 2018-2019
See p. 49 for full course description
*Cross listed in History

W **Art and Ideas** Grades 10, 11, 12 ½ credit; not offered 2018-19
Create concepts and mix media that cross over disciplines, defy classification, and invite personal interpretations! Investigating ideas about the function and aesthetic roles of art forms, in Art and Ideas, students will exercise innovative thinking, experimentation, and fabricating with a variety of materials and techniques. Mediums included in the course are clay, bookmaking, printmaking, and fibers.
Studio Fee. $20.00

W **Color Theory** Grades 10, 11, 12 ½ credit; semester course
Where do colors come from? What effects do colors have in the world? This course supports STEM objectives and is for students who are interested in the integration of science and art. Color Theory projects include a variety of media such as painting, drawing, screen printing, and digital imaging. Through research, experimentation, and reflection, students will learn the science of color integration and the art of color pairing. Studio fee: $50.00

W **The Science of Art*** Grades 10, 11, 12 ½ credit; semester course
Art and Science have always been a dynamic duo. Focusing on the science of art production and the scientific skills of investigation and experimentation, students will explore the fascinating territory in which the arts and science mingle. We will touch on each of the three major subjects in science; Chemistry, Biology and Physics and view them through an artistic lens. Using the collection at the Walters Art Museum, we will investigate several collection areas including: antiquities, manuscripts, pottery, textiles and metal. In this course, scientific theories will be presented and students will experiment with art materials to explain and explore those theories. These findings will be documented in a creative journal, which will be one of the main assessments of understanding. In addition, students will create an art piece that interprets one of the scientific theories discussed and will be asked to solve challenge problems that stretch the understanding of both material and theory.
Studio fee: $25.00

*Cross listed in Science

W **Photo I: Wet Lab** Grades 10, 11, 12 ½ credit; semester course
This course will help you see the world rather than just look at it. Discover the magic of traditional, photographic image making. Mix your own chemistry and witness images appear out of thin air. This course supports STEM objectives and introduces the art of black and white photography via the 35mm camera, picture making, and darkroom skills. Our work will include pinhole photography, photograms, double exposures, dodging and burning, motion studies and compositional principles. With emphasis on composition, photography enhances an artist's facility with drawing, filmmaking, digital imaging, and painting. Studio fee: $125.00

W **Photo II: Digital Darkroom** Grades 10, 11, 12 ½ credit; semester course
(Prerequisite: Photo I)
Take your selfies to the next level! Develop your personal, artistic vision. This class is taught both in the Wet Lab as well as in the Digital Darkroom. Students may choose to use traditional processes, digital processes, or a combination of the two to create exciting photographic bodies of work. Our work in the Wet Lab and Digital Darkroom will include studies of Perspective, Long Exposures, Light and Shadow, Portraiture, and Visual Narrative. Structured as an intensive workshop, students will refine the skills learned in Photo I, further develop their imaging skills, and explore advanced process, techniques and themes. Studio Fee: $125.00

W **Digital Portfolio** Grades 11, 12 ½ credit; semester course
(Prerequisite: Photo I, Photo II, and permission of instructor)
This course builds on the skills and processes learned in the prerequisite courses and offers opportunities for concentrating on a particular subject or style. Aimed at assembling a college portfolio, this course requires considerable dedication, discipline, and imagination. Alternative process in both traditional and

digital photography will be encouraged to expand the student's repertoire. This class may be taken up to three times; it is required for students submitting a portfolio for AP to take the course three times. Studio fee.

Drawing Grades 10, 11, 12 ½ credit; semester course
"Everyone learns to write. We are taught to write by copying marks, and even when we copy marks, we all make them individually, we all have different kinds of handwriting. Within a year or two of being taught to write, things happen to our handwriting and personal ways of making marks develop very quickly. That's the way, really, you learn to draw. And in learning to draw (unlike learning to write) you learn to LOOK. It's not the beauty of the marks we like in writing, it's the beauty of the ideas. But in drawing, it's a bit of both."- David Hockney

Drawing is fundamental to other art studies. This course grows the student's understanding of the technical and conceptual components to drawing. With a focus on observational drawing, students will investigate still life, portraiture, human figures, and architecture subjects.
Studio Fee: $40.00

Painting Grades 10, 11, 12 ½ credit; semester course
(Prerequisite: Drawing)
Investigate light, form, and color through the medium of paint. Using both traditional and innovative techniques, students will interpret still life arrangements, human figures, structures, and abstraction. In addition to painting in the studio, students will keep a visual journal, participate in critiques, and view paintings in a local museum. Students will gain a working understanding of color theory as is necessary in painting, and would benefit from taking the Color Theory course as well for increased depth of knowledge. Studio Fee: $100.00

Drawing and Painting Portfolio Grades 11, 12 ½ credit; semester course
(Prerequisite: Drawing, one of the following courses: Color Theory or Painting, and permission of instructor)
The course is for students who want to pursue a particular concept, subject or technique. Portfolio expects students to stretch themselves to expand their skills, to explore the expressive qualities of drawing, painting, printmaking or mixed media and to implement a few of their own projects. Aimed at contributing to a college portfolio, the creative work requires initiative, dedication, discipline, and imagination. This class may be taken up to three times; it is required for students submitting a portfolio for AP to take the course three times. Studio fee: $20.00-$100.00

Jewelry Grades 10, 11, 12 ½ credit; semester course
Develop basic jewelry making skills, including cutting, forging, filing, soldering, and polishing copper, silver or new gold. Students will be encouraged to expand upon design fundamentals and explore jewelry making as an expressive, inventive art form. Studio fee: $75.00

W **Woodworking: Function & Design** Grades 10, 11, 12 ½ credit; semester course
This course would provide an in-depth introduction to the tools and processes in the woodshop. From designing and selection of materials to construction and finishing, emphasis will be placed on

craftsmanship, safe use of materials and tools, and group work. Woodworking projects enhance students' spatial reasoning skills, teach complex problem solving, and help put their academic subjects, such as geometry and physics, into real life context. Hands on design classes help students gain confidence as real world problem solvers, teach perseverance, patience, and attention building skills, and instill pride of accomplishment and self-esteem through the processes of designing and making.

Studio fee. $100

W **Sculpture I** Grades 10, 11, 12 ½ credit; semester course

Create beyond the confines of the two dimensional world and allow your art to function in 3 dimensions. Design, experiment and craft three-dimensional objects with a range of materials such as plaster, metal, wood, wire and found objects. This introductory course supports STEM objectives, enhances students' understanding and manipulation of space, emphasizes problem-solving, structural and spatial reasoning, and provides training in the fundamental processes and conceptual development of sculpture.

Studio fee. $100.00

W **Sculpture II** Grades 10, 11, 12 ½ credit; semester course

(Prerequisite: Sculpture I)

Through an effective relationship between expressive content, composition, materiality, and structure, create sculptures using subtractive processes in plaster, stone and wood. Refine the skills learned in Sculpture 1, further your conceptual and technical skills, explore advanced topics and participate in group critiques. An emphasis on individual exploration of both media and concept will be encouraged. This course supports STEM objectives and is a continuation of Sculpture 1.

Studio fee. $100.0

*W***3D Portfolio** Grades 11, 12 ½ credit; semester course

(Prerequisite: Sculpture I and II and permission of instructor)

Delve deeper into the capabilities and expressiveness of sculpture, jewelry or other three-dimensional materials to assemble a body of work with innovative concepts and forms. Aimed at assembling a college portfolio, this class requires considerable motivation, discipline, and imagination. This class may be taken up to three times; it is required for students submitting a portfolio for AP to take the course three times. Studio fee: $25.00-$100.00

Performing Arts

The Performing Arts faculty prepares students to thrive in a complex and changing world. At the core of our courses and co-curricular opportunities, we support each student's authentic self-awareness and expression by fostering a "creative self" within each discipline: dance, music and theatre. Through a comprehensive curriculum organized around creating, performing, responding and connecting, students gain an understanding of performance skills, artistic process, historical relevance and how the performing arts are infused into their own cultures and communities. The cultivation of a safe, nurturing environment encourages students to take risks, make connections across art forms, develop their own artistic visions and discover confidence in their unique abilities and contributions.

MUSIC

"Music begins where the possibilities of language end…" (Sibelius), eliciting responses and presenting challenges that are at once intellectual, emotional, physical and creative. The Upper School Music program gives students the knowledge and skills necessary to express themselves musically in meaningful ways and to formulate valid aesthetic opinions about music. The required and elective courses develop music literacy and cultivate an understanding of music as an art form, which is an integral and valuable component of life in all cultures.

Co-curricular opportunities within the Upper School Music program include the Ragged Robins*, an a cappella singing group open to 11th and 12th graders by audition only, and the annual Musical Theatre production.

Garrison Forest School also offers a co-curricular Applied Music Program, through which students can receive private lessons in voice, piano, violin, flute, cello and guitar.

** Current and aspiring members of the Ragged Robins must have a minimum of at least one (1) year of Chamber Choir experience and/or permission of the Upper School Music Teacher.*

Chamber Choir Grades 10, 11, 12 1 credit; year course
(*Audition required*)
The Chamber Choir is a select vocal ensemble which performs extensively throughout the year both on and off campus. All members of the ensemble are expected to have basic facility with matching pitch and blending in an ensemble. Members will also develop a facility with sight-singing. Chamber Choir studies a challenging and varied repertoire which includes diverse classical, popular, folk and jazz selections. Students form a unified ensemble, advance in their vocal technique, and expand their musicianship and sight singing skills. Interested students also have opportunities to perform as soloists and in small ensembles. Attending all rehearsals and performances is a requirement for this course.

Music Theory I & II Grades 10, 11, 12 ½ credit; semester course
The Music Theory course is designed to explore the science and art found in music. This course develops the ability to recognize, analyze, and describe aspects of aural or written music. Topics covered in this course include but are not limited to the identification of: note names, scales, intervals, music keys, time signatures, chords, and progressions. The goal of this course is composition for choral or instrumental ensembles. In addition, aural skills will be developed to identify aspects of music composition. The course series beings with Music Theory I and continues from there. No extensive musical background is required for Music Theory I; instead an interest in music as a language is encouraged. The course series is tailored to musicians of all levels. If a student has experience with music theory, they may test into a higher level.

***AP Music Theory** Grade 12 only 1 credit; year-long (online)
(Prerequisite: prior study of music theory and departmental permission)
Offered through One Schoolhouse/Online School for Girls 2018-2019
See p. 50 for full course description

Modern Band (I, II, & III) Grades 10, 11, 12 ½ credit; semester course
(No Prerequisite – instrumental and vocal experience preferred)
Modern Band teaches students to perform, improvise and compose using popular music styles that they know and love. These include Rock, Pop, Reggae, Hip Hop, R & B, Jazz, Blues, Gospel, Rap and other modern styles. The Modern Band class features guitar, bass, keyboard, drums and vocals. Students will learn to work with technology for performance and computers to create lead sheets and compose songs. Students are required to perform in at least one school event during the course. Students in this course may also perform with a choral ensemble as the musical accompanist for performances both on and off campus. Attending all Modern Band dress rehearsals and performances is a course requirement.

Popular Music of the United States Grades 10, 11, 12 ½ credit; semester course
In this course, students explore how music from the United States was impacted by and helped to foster cultural growth in the country. The focus is primarily on the evolution of music and how music interacts with social movements in the United States. Throughout the course, students identify how seemingly disparate aspects of musical composition can be innately intertwined with elements in musical history. The course also examines how music from the United States affects culture on an international level. This course covers popular music as it evolved from the Blues to the present day styles of popular musical expression. Material is filtered through the lense of a music historian who studies music of other cultures, a performer, a producer and a consumer. The culminating project of the semester is a performance of an original composition. At the end of the course, students are expected to create a composition in the style of a time period they studied. These pieces are composed in conjunction with the instructor.

THEATRE

The Upper School Theatre program offers skills-based training in the theatre arts. From an introduction to theatre history, to acting and directing, to script work and playwriting, these courses promote active learning environments, giving students a kinesthetic and empathetic understanding, as well as an intellectual understanding, of the topics covered. Students will have opportunities to perform their work for an audience, allowing them to showcase their skills. Emphasis is on developing self-awareness of the body and voice, developing one's own aesthetic by studying various genres and styles of theatre, working with others as an ensemble, and building a strong sense of self-confidence. The skills of collaboration, creativity, self-directed learning, curiosity, and critical thinking are highlighted within each theatre course. Whenever possible, theatre courses are reflective of and offer connections to the academic curriculum and today's world.

Co-curricular opportunities within the Upper School Theatre program include three full productions per year: two plays and the annual musical theatre production. Upper School students can also be involved in the technical theatre process for these productions as assistant directors, stage managers, design team members or running crew.

Acting & Directing (I) Grades 10, 11, 12 ½ credit; semester course
This course is an introductory exploration of the role of the actor and the director. Students will be introduced to the basics of acting, which include but are not limited to: script analysis, making clear choices, identifying objectives and tactics, stage presence, vocal projection and learning how to work successfully as an ensemble. Students will also be introduced to the role of the director, using William

Ball's *A Sense of Direction* as a guide for the class. For the final project of the course, students will elect to either direct or act in a one-act play, to be presented to the Garrison Forest community.

Acting & Directing (II & III) Grades 10, 11, 12 ½ credit; semester course
(Prerequisite: Acting & Directing I or II)
Students who aspire to further explore and improve their acting or directing skills may elect to continue with this course. The acting methods of Stanislavski, Meisner, Uta Hagen and Stella Adler will be a focus in this course. The directing styles of George Abbott, Hal Prince, Tina Landau and Susan Stroman will also be studied. As opportunities arise, students may have the experience of working with professional guest artists during this course. For the final project, students will direct or act in a one-act play, to be presented to the Garrison Forest community, and create an Actor's Notebook or a Director's Notebook tracking the development of their character(s) and/or concept(s).

Playwriting Grades 10, 11, 12 ½ credit; semester course
In this class, students will read and study several plays, and begin writing (and possibly staging) scenes and monologues of their own creation. They will learn to analyze what is essential to a powerful monologue and how writing for two characters presents very different challenges. Students will study and compare the writing styles of various playwrights as they are discovering their own writer's voice. Students will be strongly encouraged to submit a final piece of their writing for publication. As opportunities arise, students may also learn from guest speakers/artists during this course.

Intro to Musical Theatre Grades 10, 11, 12 ½ credit; semester course
(*No audition required*)
Intro to Musical Theatre invites students to study musical styles, acting and vocal techniques as they relate to musical theatre performance. In this course, students will learn how to interpret musical numbers as actors and how to use movement and popular musical theatre choreography, allowing them to become well-rounded performers. The course will also cover the history of this art form, including the basic elements of musical theatre, important playwrights, choreographers, composers and directors. Various performance opportunities will be available throughout the semester.

Theatrical Production Grades 10, 11, 12 ½ credit; semester course
This semester course provides students with an in-depth exploration of the theatre production process. From initial readings and play analysis through design and production, all elements of production are explored. Class discussions, selected readings, videos and visual presentations will help students develop and demonstrate theories and concepts through practical applications. Students will take on roles as actors, directors, dramaturges, designers and stage managers as they work on two major GFS productions during the course. This course is ideal for the student who is interested in the backstage process of theatre.

DANCE

Garrison Forest School also provides rich opportunities to develop in the performing arts through participation in Beginning, Intermediate, and Advanced Dance Classes. The Upper School Dance program is a technique-based, challenging after-school program in which students focus on the development of strong dance skills, build self-confidence, and explore artistic self-expression. See p. 42-43.

COMPUTER/TECHNOLOGY

It is the goal of Garrison Forest School that each graduate leave the school confident and ready to use her technology skills. Students will have opportunities to use technology in a way that combines creativity and advanced applications.

***W Engineering Design** Grades 10, 11, 12 1 credit; year course
The objective of this course is to introduce basic concepts of engineering. In this hands-on course students will work individually and in collaborative teams to creatively solve relevant design challenges using the engineering design process. Students will be exposed to different engineering disciplines and ethics while emphasis will be upon modeling, problem-solving, and communication skills.
*Cross listed in Science

***W* Introduction to Computer Programming: Game Design**
Grades 10, 11, 12 ½ credit; semester course
This courses allows students to create their own digital games without needing any previous programming experience. Students will learn about game design and development, reimagine well known games, and bring their own ideas to the digital screen. Alongside exploring gameplay, students will be engaged in interactive design, problem-solving, and learning the principles of computer science, while using a friendly, graphical-based language. This is a class for anyone who has ever been curious about digital games, computer science, or using design and creativity in new ways. This course can be taken first semester or second semester.

***W* Game Design II**
Grades 10, 11, 12 ½ credit; semester course
(Prerequisite: Introduction to Computer Programming or permission of instructor) This course builds upon the computer science principles taught in Introduction to Computer Programming. Students will learn new programming languages while continuing to enhance their computational thinking through designing games. This course will be offered second semester only.

***W* AP Computer Science Principles** Grades 10, 11, 12 1 credit, year course
(Prerequisite: Geometry)
This course will develop computational thinking vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course is unique in its focus on fostering student creativity. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world. The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course which will prepare students for the AP exam and for further study in computer science.

***W* AP Computer Science A (Grades 10, 11, 12)** 1 credit; year course (online)

Offered through One Schoolhouse/Online School for Girls 2018-2019
(Prerequisite: Prior coursework in computer programming and permission of instructor)
See p. 49 for full course description

W **Digital Thinking: Apps to Ethics** Grade 9 non-credit; semester course
(Required of all ninth graders)
This required 9th grade course is designed to introduce and reinforce GFS technology expectations, policies and procedures and solidify students' understanding of computer science principles and practices so that they can make informed choices and use appropriate digital tools and techniques. In this course, student will explore the breadth of computing and its influence in almost every aspect of modern life as well as the social and ethical implications of using computing technology both personally and professionally.

DECISION MAKING

The goal of the Decision Making curriculum is to teach decision making skills and to provide current information on health-related topics. Classes are lecture and discussion-based and are designed to meet the needs of the students as their moral, intellectual, and social capabilities develop during their tenure in the Upper School.

Decision Making I Grade 9 non-credit; year course
(Required of all 9th graders)
This course encourages each student to examine her own value system as we discuss health topics, social and emotional issues, and ultimately, responsible decision making in everyday life. The class functions as a "group" in which students explore their values as they discuss varying topics. Each girl is encouraged to express her opinion respectfully while recognizing the differences that exist in family, ethnic, racial and cultural experiences within the class. We use films, websites, speakers and handouts to explore topics and spark discussions.

Career Explorations/Test Prep Grade 10 non-credit; semester course
(Required of all 10th graders)
During the second half of the year, the sophomore class engages in SAT/ACT test prep and Career Explorations. The Test Prep mini-course and our Career Explorations curriculum consist of six sessions taught during X-Block. The test prep course is delivered by Capital Educators, a private test prep company based in Rockville, MD. Career Explorations is team taught by the college counselors and other administrative leaders in the Upper School. Career exposure and research, resume writing and basic interviewing skills are covered in Career Explorations.

Decision Making II Grade 11 non-credit; year course
(Required of all 11th graders)
This course is designed to provide students with information involving personal values and college search strategies that will help them in making decisions about their immediate and future goals. The college search and application process is taught in this class. Camp College, a three-session college application workshop, is offered in June. Students will create a Common Application account, learn how to approach and draft supplemental essays and have their personal essay reviewed by college admissions

professionals.

Transitions Grade 12 non-credit; year course
(Required of all 12th graders)
This course helps to facilitate the transition from high school to life beyond. The first half of the year focuses on the college admission and application process while the later part of the year teaches students about personal, social, and financial skills that will guide them in the future.

ENGLISH

The English program is designed to foster appreciation for literature as a reflection of human experience and to encourage students to become insightful readers and expressive writers. Over four years, students develop their critical thinking, editing, and close reading skills; read deeply in a variety of genres; and find their own voices by writing, revising, and presenting essays and creative writing.

Requirements: All students must earn four credits of English, completing the sequence English I-IV.

Literature and Composition for Non-Native Speakers of English 1 credit; year course
(Required English course for international students new to the Upper School)
This one or two-year course introduces international students to the study of literary genres, including short stories, personal essays, nonfiction, novels, drama and poetry to be drawn from world literature. The goals of the course are to enhance English fluency in reading, writing, listening and speaking through content-based instruction as well as focused grammar and vocabulary study, and to develop academic literacy skills so that international students will be better prepared to participate fully in English II, III and IV classes. Students will participate frequently in structured academic conversations in student pairs or small groups, role play and debate in order to develop both aural and oral fluency. Students will build an academic vocabulary in this course, and will develop a foundational knowledge of literary terms and concepts. There will be a significant focus on language, and students will be taught to use word parts, context clues and cognates to aid comprehension. Students will complete many written and oral assignments, including presentations, class journal entries, short written responses, and longer expository essays. Texts will include such works as Shakespeare's *Romeo and Juliet*, Dickens' *A Christmas Carol*, Romantic poetry, American short stories and selections from world literature.

English I: Reading to Write Grade 9 1 credit; year course
This required course includes an intensive introduction to both analytical and creative writing skills, with an emphasis on academic writing, grammar, and vocabulary development. Students will read in a variety of genres including stories, personal essays, nonfiction, novels, poetry, and drama. These works will be read and studied both together as a class and through independent enrichment reading assignments. Students will generate thematic connections across genres, cultures, and contexts, and through close reading, class discussions, and extensive writing, students will develop their ability to appreciate and analyze literature. Full-length texts include *The Bean Trees* by Barbara Kingsolver, Shakespeare's *Romeo and Juliet, Life in a Jar* by Jack Mayer, *Warriors Don't Cry* by Melba Patillo Beals, *Fahrenheit 451* by Ray Bradbury, *Outcasts United* by Warren St. John.

English II: British Literature and the Human Experience Grade 10 1 credit; year course
In this course, students are encouraged to grapple with many essential questions related to the human experience. Readings and coursework include a diverse array of poetry, satire, drama, and prose that studies the role of British literature, the historical influence of British rule and the thematic tethers that both present. Students become more proficient in close readings, language analysis, vocabulary development and usage, and expository writing. As they become more sophisticated readers and writers, students gain fluency in the conventions of both written and spoken English. The wide range of writing assignments encourages students to continue to develop their own voice in their writing style. Major units are broken down thematically to represent many angles of the human experience and are titled: "Heroes", "Journeys and Sacred Pursuits", "Life Decisions and Morals Struggles", "Expression" and "Hardship and Transformation". Representative works may include *Beowulf, The Canterbury Tales, Macbeth, Frankenstein, Things Fall Apart*, and *Balzac and the Little Chinese Seamstress,* as well as a rich sampling of poems and essays that complement each unit.

English III: The Literature of American Identity Grade 11 1 credit; year course
English III is designed as a survey American literature course, with overarching themes of identity and experience, the American Dream, race in America, gender, and class. Students read short stories, novels, plays and poetry by a wide range of American writers and will analyze rhetoric in essays, speeches, letters, and other nonfiction texts. Students in English III will also continue to develop their writing skills and will have opportunities to write personal responses and narratives, to work creatively and collaboratively, and to practice their presentation and public speaking skills. Culminating projects in English III include the Passion Project, where students can delve into a topic of their choosing, and the college essay unit, where student apply the entire writing process -- drafting, revising, editing, reviewing -- to their college application essay. Although English III at Garrison Forest does not carry the AP designation, students may be recommended for the English Language and Composition exam by the English Department.

English IV: The World as Text Grade 12 1 credit, year course
Senior English encourages students to apply and synthesize all of the critical reading and writing skills taught in the Upper School. Students read canonical and contemporary works from classical Greek tragedy and contemporary American drama to novels and memoirs of personal discovery and transformation. A selection of thematically relevant poems, short stories and nonfiction accompanies each longer work. The final quarter of the course is dedicated to nonfiction texts and journalism. Students choose a nonfiction book to read independently and a subject to interview and profile, which allows them to explore non-academic writing and real-world experiences.

AP English Literature and Composition Grade 12, by recommendation 1 credit; year course
The focus of Advanced Placement English is World Literature, Drama, and Poetry with an emphasis on 19th and 20th century Western European fiction and critical theory. This college-level course demands extensive reading and writing as well as significant participation from students during seminar-style class discussions. The class requires active engagement, collaboration, and a genuine desire to broaden one's worldview. In preparation for the AP Literature exam in May, students will learn how to analyze a text at the sentence-level and discuss the ways in which an author's use of language generates and intersects with theme. Students will seek to discover *why* a writer makes his/her choices. Course texts include novels, plays, and poetry, as well as works of critical nonfiction. Analytical writing is a significant element of the

course, and students will complete at least one essay or major project for each work of literature. Many essays will be written in class as a way of preparing for the format of the AP English exam.

Support for English as a Second Language (ESL)
ESL support is provided to all for whom English is a non-native language, but Garrison Forest Upper School does not offer an ESL course or track. All students for whom English is a second language and who are new to the Upper School (including students who were in Garrison Forest Middle School) will be scheduled for the literature and composition course for non-native speakers of English.

HISTORY & SOCIAL SCIENCES

The primary goals of the History & Social Sciences Department are to help students develop the abilities to think critically, independently, ethically, and philosophically. Students should recognize that they inherit the past and that they are global citizens who share a responsibility for the present and the future.

Through a solid core of interdisciplinary and multicultural courses offered in history, students acquire the global perspective they need to appreciate diversity and to accept that there are multiple potential answers to world questions and problems. The History & Social Sciences faculty strives to challenge students through a variety of learning techniques to: analyze controversial issues and evaluate alternative solutions; practice and strengthen the skills, which will help them acquire and use knowledge; articulate an understanding of historical developments; and appreciate the dignity of individuals, cultures, and nations.

Elective offerings vary from year to year according to student interest; not all courses may run every year.

Requirements and Recommendations:

- Student must earn a minimum 3 credits of History & Social Sciences.
- Students are required to complete World History II and United States History.
- Latin Literature semester electives are cross-listed and may satisfy either a World Language or History credit (but not both).

World History I Grade 9 1 credit, year course
World History I explores the histories and cultures of major societies around world from 500 – 1500 CE. Through the exploration of facets of human civilization—cultural values and traditions, political and economic structures, ideologies and religious beliefs, scientific and artistic developments—students foster their own sense of historical imagination and empathy. Students cultivate global citizenship skills and historical habits of mind by developing their ability to assess evidence, interpret multiple perspectives, and analyze change and continuity over time. Significant emphasis is placed on the development of organizational, note-taking, critical reading, writing, and research skills.

World History II Grade 10 1 credit, year course
World History II is a continuing exploration of the issues and events which have created world history from 1500 CE to our contemporary age. With particular attention to the theme of "revolution," students analyze the causes and effects of ongoing social, economic, political, religious, intellectual, and

technological changes. They examine multiple perspectives, endeavoring to understand the interrelationships and diversity of our world. Analytical reading and writing skills are emphasized, as are the techniques of independent research.

U.S. History Grade 11 1 credit, year course
The U.S. History curriculum explores the richness of the American experience through a thematic and chronological study from the colonial period to the present. Various perspectives are considered in discussions of the evolution of the United States of America. Concepts such as the importance of civil liberties, individualism, capitalism, frontier spirit, imperialism, conflict and compromise, sectionalism and nativism are examined as students explore the variety of facets of American development. How and why events happened, and the importance of their effects, are driving elements of this course.

While developing their skills as historians, the students build on their analytical reading and writing skills to explore questions such as: What is an American? What factors make up the American identity? How does the definition of "America/n" change over time? Students use a range of primary and secondary sources such as non-fiction and fiction works, audio and visual samples, artifacts and more, to examine the various periods and movements in America's history and the many ways in which those times have been interpreted. Students are challenged to develop their ideas in written and oral expression, expository and creative writing, civil discourse and open debate.

AP United States History Grade 11, by recommendation 1 credit, year course
The AP United States History curriculum explores the richness of the American experience. While developing their skills as historians, the students build on their analytical reading and writing skills to explore questions such as: What is an American? What factors make up the American identity? How does the definition of "America/n" change over time? Using a range of primary and secondary sources such as non-fiction and fiction works, audio and visual samples, artifacts and more, we critically examine the various periods and movements in America's history and the many ways in which those times have been interpreted. Students are challenged to develop their ideas in written and oral expression, expository and creative writing, civil discourse and open debate.

Students electing this course should have both the necessary verbal skills and a strong interest in U.S. culture and history; they should expect to do more reading, and reading of a more complex nature, as well as more analytical writing, than that required in the other U.S. History sections. Because of the pressure of time and the amount of material to be covered before the AP exam, students should also be aware of the necessity of working independently; class discussion in this course is not designed to explain what students have read, but to build upon it.

AP Psychology Grade 12 1 credit, year course
(Departmental recommendation, in consultation with the Science Department)
The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. Areas covered include: history of psychology, research methods, biological bases of behavior, sensation and perception, cognitive psychology, physical, social and emotional development, abnormal behavior

and therapies, social psychology, and gender differences. This is a rigorous and demanding course requiring students to have a strong work ethic, to read at a rigorous pace, and to complete a variety of assessments, including independent research and analysis. Students are expected to demonstrate strong writing and analytical skills, and independent work habits. The AP Psychology course prepares students to sit for the AP Psychology exam in May.

Contemporary World Issues Grades 10, 11, 12 elective ½ credit; semester course
What are the roots of the crisis in Syria? What roles do sanctions play in solving conflicts? What are the consequences of global pollution? Why do some humanitarian crises receive more international attention than others? These are among the many questions that we explore in this course. The world is increasingly interconnected and students will draw from planned content as well as from daily national and international headlines. Students apply critical thinking and research skills to examine current events and contemporary issues including human rights, the strengths and weaknesses of globalization, severe environmental threats, religion and violence, etc. This is primarily an individualized exploratory course where students will have the freedom to focus on their main interests. At the same time, students will learn to engage in dialogue on issues that may be controversial. Students will keep a google site, which will be home to current events and reading reflections. Students will also work with classmates each unit to prepare educational slideshows to teach their classmates about a question they explored related to the unit's theme.

W Developmental Psychology Grades 11, 12 elective ½ credit; semester course
This course introduces the theories and current research that form the foundation of the study of human development from conception through adolescence. We study perception, learning theories, cognition, memory, language, and social and moral development. Additional topics will include psychological disorders, heredity and environment, temperament, attachment, developmental milestones and expectations, childrearing practices, gender, and cultural perspectives. This course requires students to participate in observations with children in the GFS Preschool and Lower School.

Economics: Making ¢ents of personal and global financial literacy
Grades 10, 11, 12 elective ½ credit; semester course
Using real-life data and case study activities, students explore the issues involving their own financial literacy and the factors which influence the global economy. In the process, we examine basic microeconomic and macroeconomic concepts, such as: how to budget one's money, how to be a wise consumer, making wise investment decisions, the importance of saving for retirement, supply and demand, taxes, the federal budget, and international trade.

W Half the Sky: International Perspectives on Women, Gender, and Health
Grades 11, 12 elective (grade 10 with permission) ½ credit; semester course
This innovative Public Health course is designed to unite the humanities and science to provide students with the knowledge, understanding, and skills needed to identify and understand emerging global issues related to girls' and women's health. Women's health issues including reproductive health, child marriage and motherhood, and disparities impacting the health and well-being of women and girls will be examined through the lenses of culture, government, education, and economics. Particular attention will be paid to issues that affect adolescent women internationally and in the United States. This course is

recommended for students with an interest in a Public Health WISE placement and/or in the Jenkins Fellows program.

Modern Latin America Grades 10, 11, 12 elective ½ credit, semester course
Latin America is a diverse and expansive region, which represents many ethnicities, interests and cultures. This course examines Latin America since its Age of Independence in the 1800s. Both parallels and differences among the various nations of Latin America will be explored. Students learn about the leaders, artists, economies, politics, and popular cultures of Latin American through primary and secondary sources, case studies, literature and video. Current issues regarding Latin American relations with the United States and immigration policies are also important topics of discussion.

***Latin Literature: Prose and Poetry (Fall)** ½ credit, semester course
(*Prerequisite: Latin III-Honors or Latin IV; this course is offered as a pre- or post-AP option. With permission.)*
Romance, Regret and Revenge: Tales of Love on the Rocks: A literature course for students who have mastered the study of advanced Latin grammar. Selections will include poems of Catullus, excerpts from Cicero's *Pro Caelio*, scenes from Ovid's *Metamorphoses* and Vergil's *Aeneid* (a preview of the poetry in the AP course). Through the careful reading of the Latin texts, students will develop and hone facility in translation, literary and historical interpretation, and critical analysis.
*Cross listed in World Languages

***Latin Literature: Prose and Poetry (Spring)** ½ credit, semester course
(*Prerequisite: Latin III-Honors or Latin IV; this course is offered as a pre- or post-AP option. With permission.)*
Enemies of Rome: A literature course for students who have mastered the study of advanced Latin grammar. Readings will focus on hostile reactions to Roman power and cultural influence as it dominated a growing empire. Selections will include excerpts from Caesar's *De Bello Gallico* (a preview of the prose in the AP course), Cicero's *In Catilinam*, Sallust's *Bellum Catilinae*, Livy's *Ab Urbe Condita*, Tacitus's *Annales*, and poems of Catullus and Horace. Students will develop and hone facility in translation, literary and historical interpretation, and critical analysis.
*Cross listed in World Languages

Modern Africa Grades 10, 11, 12 elective ½ credit, semester course
This course studies the history of Africa and its interactions with the western world from the mid-19th century through the present. Paying special attention to African current events, students explore salient historical questions that are relevant to understanding the continent today. We explore a range of issues from a variety of countries, including but not limited to colonial Congo, postcolonial South Africa, and modern Rwanda, Uganda, South Sudan, Libya, Mali, and Nigeria. These issues include global relationships, governance, education, ethnic and religious relations, and violent extremism. We work to dispel stereotypes and explore commonalities and differences. The study of African history is not just in understanding its turbulent history, but also in appreciating its rich musical and artistic cultures. Students are expected to have a genuine curiosity about modern Africa resulting in active participation. Students end the course with an independent research project on a contemporary issue in a country of their choice.

Modern Middle East Grades 10, 11, 12 elective ½ credit, semester course

This course is designed to increase awareness and understanding of the varied and diverse histories of Middle Eastern and North African states. The course will begin with a review of broad themes encompassing most states in the region, such as colonial and postcolonial history, geography, nationalism, Islam, political economy, and regime types. The course will then be devoted to a closer investigation of several states, and finally the course will address specific pressing issues in the Middle East today, including the Arab-Israeli conflict, the Iran nuclear issue, the Arab Spring, and the depiction of the Middle East in the media. Throughout the course students will read and analyze current events selected from the New York Times Middle East coverage online, as well as a host of other sources**.**

Recent American History: From JFK to Today
Grade 12 elective ½ credit, semester course
(Prerequisite: U.S. History/American Studies or AP U.S. History)
This course examines major events from the presidency of John F Kennedy to the presidency of Donald J. Trump. The speeches, films, newsreels, literature, primary documents, political campaigns and popular culture of this time are analyzed in written and spoken form. The assignments for this course include expository essays, case studies, group projects and class debates. The twentieth century was known as the American Century. Will the same be said of the twenty-first century?

Stopping Genocide Grades 10, 11, 12 elective ½ credit, semester course
This course takes us on a journey into the heart of one of the most troubling aspects of the human condition: ethnic conflict and the "cleansing" that sometimes accompanies it. We begin with an examination of the most recognized genocide in recent history, the Holocaust. We also learn about other modern examples of "ethnic cleansing," focusing on why these events occur, what drives people to participate in them, and how ethnic conflict can be avoided in future generations. We explore these questions, and more, utilizing a variety of modalities: students should expect a heavy emphasis on primary document readings, individual research and reporting, documentaries, and discussion.

World Religions Grades 10, 11, 12 elective ½ credit, semester course
This course explores the history, beliefs, practices, and contemporary influence of Judaism, Christianity, Islam, Hinduism, and Buddhism. Through a broad variety of primary and secondary sources—including sacred texts, interviews, news articles, personal narratives, podcasts, film, artwork, and field trips—we ponder how people have grappled with the essential questions of "Who am I? What is my purpose in this life? What is the meaning of suffering and death? What are my obligations? What is right and ethical?" We learn about the rituals that shape the lives of followers and examine the roles religions play in current political and social controversies, both across the globe and here in the United States. In addition to discussion and journal writing, students have the opportunity to research a specific religious movement or issue according to their interests.

WORLD LANGUAGES: CHINESE, FRENCH, LATIN, AND SPANISH

The World Languages Department strives to develop a love of and an appreciation for the power of languages. We seek to develop fluency, language awareness, cultural competency, and an analytical mind.

It is important to us that all our courses have a strong cultural component in order to offer an authentic experience and cultivate a global citizen's perspective. Our modern language courses aim to develop equally the speaking, listening, writing, and reading skills of our students by providing classes that are taught progressively in the target language. In Latin the focus is on developing analytical reading skills enabling students of all levels to appreciate literature and cultivate the skills of literary criticism. We believe in differentiated teaching, so that students of diverse abilities can gain access to the beautifully complex world of languages. Students will emerge from our curriculum with a solid language foundation, an appreciation for diverse cultures, and the tools to navigate and contribute to a multilingual and multicultural world.

Requirements and Recommendations.

- Chinese, French, Latin, and Spanish courses are available in sequence through Levels I, II, III, IV, V, and AP.
- Students are placed at the appropriate level depending on previous experience.
- Students are required to complete Level III in one world language, and it is recommended that they carry at least one world language through grade 12.
- Students entering grade 9 with a modern language and Latin are encouraged to continue both languages at least through grade 9.
- Students must complete through Level II of a language in order to receive credit for Level I.

CHINESE

Chinese I 1 credit; year course

Chinese I is an introductory Mandarin Chinese course. It is open to students with little or no previous language background in Chinese and to those who wish to begin study in a world language. The objective of this course is to enable students to use simple Chinese in common real-life daily settings through studying the fundamentals of pronunciation, grammar and character writing. Cultural knowledge related to lessons will be introduced to enrich understanding and strengthen interest in learning Chinese.

Chinese II and II Honors 1 credit; year course

Chinese II and II Honors are intended for students who have successfully completed the introductory level. The class enables students to further develop the communicative skills of listening, speaking, reading, and writing Mandarin Chinese at an intermediate-low level. The course focuses on basic language skills and emphasizes the development of oral proficiency. It also expands upon vocabulary and grammatical structures. Students will explore Chinese culture from traditional China to the 21st century through research projects, videos, and short stories. Honors students are introduced to more challenging material and assessments.

Chinese III and III Honors 1 credit; year course

(Prerequisite: Chinese II or II Honors)

Chinese III and III Honors is designed to consolidate the skills (listening, speaking, reading, and writing) that students have acquired in Chinese II or IIH, as well as to introduce more complex grammatical structures and broader vocabulary. Students develop the ability to apply their language skills toward interpretive, presentational, and interpersonal practice. Various visual and audio aids allow students to

explore Chinese culture from traditional China to the 21st century. Honors students are introduced to more challenging material and assessments.

Chinese IV, IV Honors, and V 1 credit; year course

(Prerequisite: Chinese III or III Honors)

This course is designed for students who wish to continue to study Chinese beyond the required Level III course and to reach an intermediate-high level. Student continue to focus on reading, writing, listening, and speaking skills while acquiring new vocabulary and reviewing all basic and advanced grammar. There is an emphasis on oral communication and writing skills. Students are involved in oral discussion of all material studied. They also write papers about the themes studied in class. They read a variety of materials about the culture and history of China. The curriculum alternates every other year so that students are not repeating the same material if they are in this course for two years. Honors students are introduced to more challenging material and assessments.

AP Chinese Language and Culture 1 credit; year course

(Prerequisite: Chinese IV Honors)

This advanced course is designed to establish strong communication skills, and for students who have taken Honors Chinese courses throughout the Upper School and who are on track to take the AP Language and Culture exam at the end of their senior year. Students will explore the five AP topics suggested by College Board (Global Challenges, Sciences and Technology, Contemporary Life, Personal and Public Identities, and Families and Communities) through informational and literary sources spanning the Chinese-speaking world. Students will also receive a complete grammatical review while acquiring additional advanced-level vocabulary.

FRENCH

French I 1 credit; year course

This course introduces the fundamental elements of the French language within a cultural context. Students acquire basic listening, speaking, reading, and writing skills while exploring the daily life of various French-speaking communities around the world. By the end of the year, they can use basic vocabulary and grammar to talk, read, and write about their family, food, school, daily routine, and major French customs.

French II 1 credit; year course

(Prerequisite: French I)

This course reviews and builds on the grammar, vocabulary, and cultural competency taught in French I to enhance conversational, listening, reading, and writing skills. Audio and video programs will be used to bring francophone cultures into the classroom and make the study of French a complete cultural and linguistic experience.

French II Honors 1 credit; year course

(Prerequisite: French I. By departmental recommendation)

French II Honors is designed to consolidate the language skills (listening, speaking, reading, and writing) that students have acquired in French I, as well as to introduce more complex grammatical structures and broader vocabulary. Students develop the ability to apply their language skills toward interpretive,

presentational, and interpersonal communication. They continue to explore the cultures of the French-speaking world through videos, short documentaries, and informational texts.

French III 1 credit; year course

(Prerequisite: French II)

This intermediate course reviews and builds on the grammar, vocabulary, and cultural competency taught in French II to enhance conversational, listening, reading, and writing skills. Students explore the societies and cultures of the French-speaking world through a variety of authentic texts, interviews, commercials, documentaries, and short films. They make presentations, stage skits, converse with their classmates, and write short essays. By the end of the year, they can express themselves with simple but accurate grammar about present, past, and future events. Also, they have acquired enough vocabulary and cultural competency to compare their own community with the communities of the French-speaking world.

French III Honors 1 credit; year course

(Prerequisite: French II Honors. By departmental recommendation.)

This intermediate course is designed for students who are on track to take the AP exam. Students will expand upon their speaking, listening, reading, writing, and cultural skills through an accelerated study of vocabulary and grammar, numerous informational and short literary texts, as well as short movies, interviews, commercials, and news broadcasts. They will strengthen their oral fluency by making presentations and engaging in spontaneous conversations. They will also write essays on various aspects of the cultural and social life of the French-speaking world. The class is taught mostly in French.

French IV/V 1 credit; year course

(Prerequisite: French III or French IV)

This upper intermediate course is designed for students who wish to continue to study French beyond the required Level III course and is taught mostly in French. Students will continue to focus on reading, writing, listening, and speaking while acquiring new vocabulary and reviewing all basic and advanced grammar. They will also continue to explore the various cultures of the French-speaking world with an emphasis on current events and social issues. Students will read and analyze informational and literary texts, be involved in oral discussions, write compositions, and make presentations. They will also expand their knowledge of the French-speaking world by watching documentaries, short movies, and news broadcasts. The curriculum will alternate every other year so that students are not repeating the same material if they are in this course for two years.

French IV Honors/ V Honors/ AP French Language and Culture 1 credit; year course

(Prerequisite: French III Honors or French IV Honors. By departmental recommendation)

This advanced course is designed for students who have taken Honors French courses throughout the Upper School and who are on track to take the AP Language Exam. The French IV Honors students (typically juniors) will have two years to prepare for the Advanced Placement Exam while the French V AP students (typically seniors) will take the AP Language and Culture Exam at the end of the course year. Students in both classes will work towards further developing their speaking and listening skills as well as reading comprehension and written expression. They will explore the five AP topics (Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, and Families and

Communities) through informational and literary sources spanning the French-speaking world. Students will also receive a complete grammatical review while acquiring additional advanced-level vocabulary.

LATIN

Through a framework of Roman civilization and classical mythology, the Latin program builds the skills that will enable students to read original Latin literature. *Cambridge Latin Course*, a reading-based approach, is the foundation of the curriculum, and by Level III students begin to read selected works of Ovid, Catullus, Pliny, Martial, and Vergil. In all courses, the development of English vocabulary through Latin roots is stressed.

Latin I 1 credit; year course

Latin I introduces the fundamentals of Latin grammar (case, tense, sentence structure) through the reading-based approach of the Cambridge Latin Course. Following the daily life of a family in Pompeii, the stories build to the eruption of Mt. Vesuvius. Quintus, a survivor, travels to Roman Britain, and through his adventures, students begin to learn about life in the Roman provinces. In this course, students develop language awareness and learn to use the building blocks of Latin roots to strengthen English vocabulary.

Latin II 1 credit; year course

(Prerequisite: Latin I)

As the Cambridge Latin Course readings in Latin II grow more complex, the plot focuses on Quintus' adventures in the Roman provinces of Britain and Egypt. Building on the basics of Latin I, students further develop their knowledge of grammar and sentence structure, including relative clauses, participles, and subjunctive clauses. Building English vocabulary through Latin roots continues to be emphasized.

Latin II-Honors 1 credit; year course

(Prerequisite: Latin I. By departmental recommendation)

As the Cambridge Latin Course readings grow more complex, the plot focuses on Quintus' adventures in the Roman provinces of Britain and Egypt. Building on the basics of Latin I, students further develop their knowledge of grammar and sentence structure, including relative clauses, participles, and subjunctive clauses. Building English vocabulary through Latin roots continues to be emphasized. *Latin II-Honors moves at an accelerated pace and has heavy demands in terms of learning forms and vocabulary.*

Latin III 1 credit; year course

(Prerequisite: Latin II/II-Honors)

The action of the Cambridge Latin Course plot moves to the city of Rome where students read about the highs and lows of Roman imperial life. This course completes the study of Latin grammar, including more complex and idiosyncratic grammatical structures. By the end of the year, students are ready for a taste of original Latin literature (Martial, Ovid, Catullus, Vergil). Building English vocabulary through Latin roots continues to be stressed.

Latin III-Honors 1 credit; year course

(Prerequisite: Latin II/II-Honors)

The action of the Cambridge Latin Course plot moves to the city of Rome, and in this context students read about the highs and lows of Roman imperial life. This course completes the study of Latin grammar, including the more complex and idiosyncratic grammatical structures. During second semester, the focus is original Latin literature to prepare students for advanced work in Latin. Authors include Martial, Ovid, Catullus, and Vergil. Building English vocabulary through Latin roots continues to be stressed. *Latin III-Honors moves at an accelerated pace and has heavy demands in terms of learning forms and vocabulary.*

Latin IV/Latin IV-Honors/Latin V 1 credit; year course

(Prerequisite: Latin III or III-Honors. By departmental recommendation)

These advanced courses are for those who wish to continue in Latin and are designed according to the needs and abilities of the students. Reading selections may include the love poetry of Catullus and Horace, portions of Vergil's *Aeneid* and Ovid's *Metamorphoses*, as well as excerpts from Cicero's orations. A thorough review of advanced grammar is an integral part of these courses. For qualified juniors, Latin IV-Honors provides preparation for Latin AP.

AP Latin 1 credit; year course

(Prerequisite: Latin III-Honors or Latin IV-Honors. By departmental recommendation)

Qualified students pursue the study of both Vergil's *Aeneid* and Caesar's *De Bello Gallico* preparing for the College Board Advanced Placement exam. This course provides an opportunity to enjoy in Latin the adventure, drama and romance of Vergil's great epic as well as to explore the crisp prose and strategic leadership of Julius Caesar. Through this experience students develop college-level facility in translation, literary interpretation, and critical analysis.

***Latin Literature: Prose and Poetry (Fall)** ½ credit; semester course

(Prerequisite: Latin III-Honors or Latin IV; this course is offered as a pre- or post-AP option. By departmental permission.)

Romance, Regret and Revenge: Tales of Love on the Rocks: A literature course for students who have mastered the study of advanced Latin grammar. Selections will include poems of Catullus, excerpts from Cicero's *Pro Caelio*, scenes from Ovid's *Metamorphoses* and Vergil's *Aeneid* (a preview of the poetry in the AP course). Through the careful reading of the Latin texts, students will develop and hone facility in translation, literary and historical interpretation, and critical analysis.

*Cross listed in History

***Latin Literature: Prose and Poetry (Spring)** ½ credit; semester course

(Prerequisite: Latin III-Honors or Latin IV; this course is offered as a pre- or post-AP option. By departmental permission.)

Enemies of Rome: A literature course for students who have mastered the study of advanced Latin grammar. Readings will focus on hostile reactions to Roman power and cultural influence as it dominated a growing empire. Selections will include excerpts from Caesar's *De Bello Gallico* (a preview of the prose in the AP course), Cicero's *In Catilinam*, Sallust's *Bellum Catilinae*, Livy's *Ab Urbe Condita*, Tacitus's *Annales*, and poems of Catullus and Horace. Students will develop and hone facility in translation, literary and historical interpretation, and critical analysis.

*Cross listed in History

Independent Study in Ancient Greek 1 credit; year course
(*Prerequisite: advanced level Latin. Requires application and permission. Offered based on enrollment.)*
A course in the basics of ancient Greek for qualified advanced level Latin students.

SPANISH

Spanish I 1 credit; year course
This course introduces the fundamental elements of the Spanish language within a cultural context. Students acquire basic listening, speaking, reading, and writing skills while exploring the daily life of various Spanish-speaking communities around the world. By the end of the year, they can use basic vocabulary and grammar to talk, read, and write about their family, food, school, daily routine, and major Hispanic customs.

Spanish II 1 credit; year course
(Prerequisite: Spanish I)
This course reviews and builds on the grammar, vocabulary, and cultural competency taught in Spanish I to enhance conversational, listening, reading, and writing skills. Audio and video programs will be used to bring Hispanic culture into the classroom and will help make the study of Spanish a complete cultural and linguistic experience.

Spanish II Honors *(Prerequisite: Spanish I. By departmental recommendation***)** 1 credit; year course
Spanish II Honors is designed to consolidate the language skills (listening, speaking, reading, and writing) that students have acquired in Spanish I, as well as to introduce more complex grammatical structures and broader vocabulary. Students develop the ability to apply their language skills toward interpretive, presentational, and interpersonal communication. Audio and video programs will be used to bring Hispanic culture into the classroom and will help make the study of Spanish a complete cultural and linguistic experience.

Spanish III 1 credit; year course
(Prerequisite: Spanish II)
This intermediate course is designed to consolidate the skills (listening, speaking, reading, and writing) that students acquired in Spanish II, as well as to introduce more complex grammatical structures and broader vocabulary. Students will build their cultural competency by exploring the societies and cultures of the Spanish-speaking world through a variety of texts and visual aids. They will also develop the ability to apply their language skills through interpretive, presentational, and interpersonal practice.

Spanish III Honors 1 credit; year course
(Prerequisite: Spanish II Honors)
This intermediate course is designed for students who are on track to take the AP exam. Students will expand their speaking, listening, reading, and writing skills through an accelerated study of vocabulary and grammar, numerous informational and short literary texts, and various audiovisual materials, all allowing for an increased cultural awareness. They will strengthen their oral fluency by engaging in spontaneous conversations on a daily basis and will write short compositions.

Spanish IV 1 credit; year course

(Prerequisite: Spanish III)
This upper intermediate course is designed for students who wish to continue studying Spanish beyond the required Level III course. Students will continue to focus on reading, writing, listening, and speaking skills while acquiring new vocabulary, reviewing grammar covered in previous years, and learning more advanced grammatical structures. The primary goal of this course is to strengthen the students' reading skills and oral and written communication. Students will read a variety of authentic materials and watch short films related to the history, culture, and current events of the Spanish-speaking world.

Spanish IV Honors 1 credit; year course
(Prerequisite: Spanish III Honors)
The Spanish IV Honors course is intended for students who wish to develop proficiency and integrate their language skills using authentic materials. Its primary goal is to strengthen the students' language skills and to develop their cultural competency. Students demonstrate their level of Spanish proficiency across three communicative modes: interpersonal, interpretive, and presentational. The course is designed for students who want to continue with the AP Language and Culture Course the following year.

Spanish V 1 credit; year course
(Prerequisite: Spanish IV)
Spanish V is a course designed for students who have successfully completed the Level IV course and who are passionate about continuing the study of Spanish. Students will put into practical use all the skills acquired in their previous years of learning Spanish while working to achieve a higher level of fluency through reading, writing, listening, and speaking. Students will continue to focus on vocabulary acquisition, learn the more advanced grammatical structures of the Spanish language, and strengthen their reading, oral, and writing skills. Students will also take a more in-depth look at the history, culture, and current events of the Spanish-speaking world through movies, short films, newspaper articles, short stories, and novels.

AP Spanish Language and Culture 1 credit; year course
(Prerequisite: Spanish IV Honors; by departmental recommendation)
The AP Spanish Language and Culture course is intended for students who already have extensive knowledge of the language and culture of Spanish-speaking communities and have attained a reasonable proficiency in listening comprehension, speaking, reading and writing. Students develop a strong command of the Spanish language by integrating the three modes of communication: interpersonal, interpretive, and presentational. The course focuses on the integration of authentic resources with the goal of providing a rich, diverse learning experience. Resources include online print, audio and audiovisual materials, literature, essays, and articles from magazines and newspapers. The course is divided into thematic units and guided by essential questions.

AP Spanish Literature and Culture 1 credit; year course
(Prerequisite: AP Spanish Language and Culture; by departmental recommendation)
The AP Spanish Literature and Culture course is designed for students who have successfully completed the AP Spanish Language and Culture course and have the desire to continue studying Spanish. This course prepares students to take the advanced placement exam, by providing varied opportunities for students to acquire, identify, understand, discuss, interpret and analyze literary works of prose, poetry and drama. Students are required to discuss literary texts and their different historical and socio-cultural

contexts using the appropriate literary terminology, and emphasizing on critical reading and analytical writing. This class covers the entire official AP Spanish Literature and Culture reading list issued by the College Board. The readings include authors from the Middle Ages to the Golden Age and nineteenth century to more contemporary writers such as Isabel Allende and Garcia Marquez. This class may be offered online based on enrollment.

Independent Advanced Spanish Culture and Literature 1 credit; year course
(Prerequisite: AP Spanish Language and Culture; by departmental recommendation)
This advanced course is designed for students who have successfully completed the AP Spanish Language and Culture course. Students will read and analyze Spanish and Latin American literature. Students will also explore current events in the Spanish-speaking world by reading articles from newspapers and magazines, by listening to the news and music, and watching videos and movies. As a result of these activities, students are expected to give oral reports in class and lead debates. This class is reserved for students who have demonstrated their commitment to advanced Spanish studies, their ability to work independently, as well as their academic accountability.

MATHEMATICS

The Mathematics Department believes that students need to have mathematical competency and confidence to be able to participate fully in modern society. We wish to develop in all students the analytical and technical skills that will prepare them for a college education, to develop their understanding of the underlying concepts of mathematics, to foster independent thinking, to increase enjoyment of the subject, and to help every student attain the self-confidence that comes from genuine achievement.

Requirements and Recommendations:
- The study of mathematics is required at least through junior year.
- Each student is required to complete at least 3 credits of mathematics in grades 9 through 12 and is strongly encouraged to take mathematics each year.
- Every student must complete at least Algebra I and II and a year of Geometry.

Algebra I 1 credit; year course
A thorough study of basic algebra, focusing both on symbolic manipulation and applied problem-solving. Topics include the four arithmetic operations with real numbers and variables; equations and inequalities; graphs and functions; polynomials and factoring; irrational numbers and radicals; and quadratic functions.

Geometry with Algebraic Thinking 1 credit; year course
(Prerequisite: Algebra I)
This course provides an introductory geometry course integrated with an intensive review of elementary algebra. Intended for students whose background in algebra needs additional support, this course covers points, lines, planes, angles, parallel and perpendicular lines, triangles, quadrilaterals, polygons, congruence and similarity, inequalities in triangles, right triangles, circles, area and volume, and coordinate geometry. The nature of deductive proof will be introduced in the course, but will not be a major focus.

Geometry 1 credit; year course

(*Prerequisite: Algebra I and departmental recommendation)*

A rigorous study of Euclidean geometry including points, lines, planes, angles, parallel and perpendicular lines, triangles, quadrilaterals, polygons, congruence and similarity, inequalities in triangles, right triangle trigonometry, circles, area and volume, and coordinate geometry. The nature of deductive proof and the structure of a mathematical system are emphasized throughout the course.

Geometry & Trigonometry Honors 1 credit; year course

(*Prerequisite: Algebra I and departmental recommendation)*

A deeper treatment of all the geometry topics listed above, including more extensive study of trigonometry and coordinate geometry.

Algebra II 1 credit; year course

(*Prerequisite: Geometry with Algebraic Thinking*)

This intermediate algebra course includes the topics of real numbers, linear equations and inequalities, systems of linear equations and inequalities, polynomials, rational expressions, graphs and functions, factoring, radicals, complex numbers, quadratic and polynomial equations, and exponents.

Algebra II & Trigonometry 1 credit; year course

(Prerequisite: Geometry and departmental recommendation)

This advanced algebra course includes the topics of real numbers, linear equations and inequalities, systems of linear equations and inequalities, polynomials, rational expressions, graphs and functions, factoring, radicals, complex numbers, quadratic and polynomial equations, exponents, logarithms, and triangle trigonometry, including Law of Sines and Law of Cosines.

Algebra II & Trigonometry Honors 1 credit; year course

(Prerequisite: Geometry & Trigonometry Honors and departmental recommendation)

For qualified students, this course includes all the above Algebra II & Trigonometry topics in greater depth and also covers variation and trigonometry and their applications. Trigonometry topics will include triangle trigonometry, circular functions, and radian measure.

Functions & Trigonometry 1 credit; year course

(Prerequisite: Algebra II)

This course provides a comprehensive review of algebraic topics including polynomial, rational, radical and exponential functions and introduces logarithmic functions and trigonometry.

Precalculus 1 credit; year course

(Prerequisite: Algebra II & Trigonometry and departmental recommendation)

This course covers more advanced algebra topics and trigonometry. Major topics are linear, quadratic, polynomial, rational, exponential and logarithmic functions and their graphs, inequalities, general properties of functions, properties and graphs of the trigonometric functions, the inverse trigonometric functions, trigonometric equations and applications, triangle trigonometry, trigonometric formulas and identities and limits.

Precalculus Honors 1 credit; year course

(Prerequisite: Algebra II & Trigonometry Honors and departmental recommendation)

The focus of this course is the concept and applications of functions. Trigonometry is covered in depth: trigonometric equations and their applications, triangle trigonometry, and trigonometric addition formulas. Other Precalculus topics are polar coordinates and complex numbers, sequences and series, and vectors and determinants. The following calculus topics are studied: limits and their properties, differentiation rules, the applications of differentiation.

Statistics 1 credit; year course

(Prerequisite: Algebra II)

This introductory course will emphasize conceptual understanding and applications of statistics; computations, plotting, and regressions will be done on the TI-83/84 graphing calculator. Topics will include organization and analysis of data, averages and variation, regression and correlation, probability, normal curves, distributions, estimation and inference. This course may be taken either as an elective or as a student's sole math class.

Calculus 1 credit; year course

(Prerequisite: Precalculus)

An introduction to differential and integral calculus within the larger context of the function. Major topics are functions, limits, derivatives, applications of differentiation, and integrals and their applications. Students will strengthen their understanding of Precalculus mathematics and be prepared for college calculus.

W **AP Calculus AB** 1 credit; year course

(Prerequisite: Honors Precalculus or Precalculus and departmental recommendation)

A college-level calculus course covering the basic theory and applications of the derivative and integral. Students who take this course will be expected to take the Advanced Placement Calculus AB examination.

W **AP Calculus BC** 1 credit; year course

(Prerequisite: Honors Precalculus and departmental recommendation)

This more advanced college-level calculus course includes, in addition to the topics of the AB course, advanced techniques of integration, infinite series, and calculus with parametric, polar, and vector-valued functions. Students who take this course will be expected to take the Advanced Placement Calculus BC examination.

W **Advanced Calculus and Linear Algebra** 1 credit; year course

(Prerequisite: AP Calculus BC and departmental recommendation)

This course will cover some topics that are not part of the AP Calculus BC curriculum, such as hyperbolic functions, centers of mass and centroids, among others. We will also explore topics that are studied in Multivariable Calculus, Differential Equations and Linear Algebra. Some of the Multivariable topics include vectors and vector valued functions, differentiation in several variables, optimization in several variables, multiple integration, and line and surface integrals. In addition, Differential Equations topics will include solving first order and simple higher order equations with applications to various scientific fields, laws of planetary motion, fundamental theorems of vector analysis, solving linear differential

equations and their applications, and Laplace transform methods. Finally, some of the Linear Algebra concepts covered will be vector spaces, linear transformations, matrices, systems of linear equations and determinants. A student who is qualified for this course should be prepared for independent study.

W **AP Statistics** 1 credit; year course
(Prerequisite: Successful completion of Algebra II & Trigonometry and departmental recommendation)
This course is a non-calculus-based, college-level course in statistics. Students planning collegiate studies in the physical sciences, social sciences, or business fields should consider taking this course. AP Statistics focuses on four conceptual themes: exploring data, planning a study, anticipating patterns, and inference. This course is designed to provide students with opportunities to design, administer, tabulate and analyze results from surveys and experiments. This course will also help students develop their analytical reading and writing capabilities. Students who take this course will be expected to take the Advanced Placement Statistics examination.

PHYSICAL EDUCATION AND ATHLETICS

Physical Education Requirement and Options

The Physical Education Department provides an opportunity for physical activity for each student and requires participation in all classes specific to each area of study. Students are encouraged to develop positive habits and attitudes toward fitness and healthful living through these classes. The Athletic Program attempts to provide students with many opportunities to compete in a sport at a level appropriate to the student's skill and experience while keeping safety in mind. Through participation on a team the student is encouraged to develop favorable attitudes of competition, sportsmanship, responsibility, loyalty, and a sense of contribution to group effort. Every effort will be made to provide multiple levels of team opportunities (V, JV); however, participation and numbers and/or league sponsorship may preclude some teams from being sponsored by Garrison Forest School.

NOTE: For all interscholastic sports, there is a $50.00 transportation charge.

UPPER SCHOOL PHYSICAL EDUCATION REQUIREMENTS
All physical education activities have a value of one (1) point:
- Interscholastic sports
- Physical education classes
- Dance
- On-campus riding instruction (3 lessons per week)
- Polo
- Approved independent physical education

Each student entering Garrison Forest Upper School as a freshman must complete six (6) points of participation before the conclusion of her junior year.

Students new to Garrison Forest Upper School as sophomores must complete four (4) points of participation before the conclusion of their junior year.

Students new to Garrison Forest Upper School as juniors must complete two (2) points of participation before the conclusion of their junior year.

If a WISE student has not already completed her graduation requirement, she is expected to participate in physical education class on days when she does not have off-campus WISE responsibilities.

Fall options:

- Tennis Team
- Field Hockey Team
- Cross Country Team
- Volleyball Team
- Soccer Team
- Dance
- Riding Team (fee)
- Riding Lessons (fee)
- Polo (fee)
- PE Class
- Independent PE (with PE Chair approval)

Winter Options:

- Basketball Team
- Indoor Soccer Team (fee)
- Indoor Track Team
- Dance
- Riding Team (fee)
- Riding Lessons (fee)
- Polo (fee)
- PE Class
- Squash Team (fee)
- Independent PE (with PE Chair approval)

Spring Options:

- Badminton Team
- Lacrosse Team
- Softball Team
- Dance
- Golf Team (fee)
- Golf Lessons (fee)
- Polo (fee)
- Riding Team (fee)
- Riding Lessons (fee)

- Independent PE (with PE Chair approval)

❖ Students may only participate in one activity per trimester for credit;
❖ Once a team roster is posted, students are committed to that activity.

A student may miss a maximum of one PE class. Any additional missed classes must be made up in a physical activity approved by the PE Department Chair. Students who do not meet the Physical Education requirement will fail the class for the trimester and must make up the work satisfactorily in order to receive credit for the class. The student will meet with the Chair of the Physical Education Department to determine when and how the work will be made up.

Independent Physical Education *(requires formal written request and permission from Department)*
Program criteria and guidelines include:

- The activity/discipline is not available at Garrison Forest School.
- At least 2 hours of the proposed activity per week and at least 2 years of involvement in this activity prior to the request for independent status.
- The activity must be supervised by a certified or qualified professional in the field.
- The activity does not occur during the same competitive season at Garrison Forest School.
- A list of dates, times and locations for competitions/performances is included in the proposal for the trimester waiver requested.

Students are expected to participate in Garrison Forest Physical Education classes until their waiver is granted.

DANCE

The Upper School Dance program is a technique-based, challenging after-school program in which students focus on the development of strong dance skills, build self-confidence, and explore artistic self-expression. Three levels of dance are offered: Beginner, Intermediate, and Advanced. These three levels offer students the opportunity to learn dance discipline and performance skills through the study of jazz, ballet, and lyrical/contemporary dance styles. Each class is structured to include warm-up exercises, center combinations, and locomotor movement patterns that require significant physical exertion and concentration. Opportunities for performance include informal showings throughout the year and a full concert production in the spring. All students taking dance in the spring season are required to perform in the spring concert and attend all tech rehearsals the week of the performance. In addition, students are encouraged to attend professional performances as scheduled by the instructor. Some out-of-class rehearsals will be required of Intermediate and Advanced students in preparation for performances. Students earn points toward their Physical Education credit for each season of Dance.

Beginner Dance Grades 9-12 Fall, Winter, Spring
(*No audition necessary*)
Beginner Dance is offered Tuesdays and Thursdays from 3:30-4:30pm. The primary goals of Beginner Dance are to foster the understanding of dance as an aesthetic, kinetic art form and to introduce elements of jazz, ballet, and contemporary dance styles in a studio setting. Students will learn to prepare the body for dance through a warm-up incorporating strengthening and stretching exercises. They will learn basic ballet leg work and positions, turns and leaps, modern dance and jazz curvature and contraction of the

torso, and short dance combinations. Students in the second semester will learn and perform a complete dance from start to finish. Students with no prior dance experience do not need to attend the placement class held prior to the start of the semester.

Intermediate Dance Grades 9-12 Fall, Winter, Spring
(*Placement audition or permission of instructor*)
Intermediate Dance meets Tuesdays and Thursdays from 4:30-5:45pm and is offered to students who have some prior dance experience or who have made significant progress in the Beginner course. Year-long participation is strongly encouraged, but not required. Students placed at the Intermediate level build on the foundation of basic dance elements, continue to study ballet technique, explore dance combinations that are increasingly complex and expand into complete dances, and focus on dance as a performing art. This course strongly emphasizes performance and will include performances throughout the year as well as a full-length two-evening production in the spring. Intermediate Dance students are required to attend some out-of-class rehearsals on a very occasional basis in preparation for performance.

Advanced Dance Grades 9-12 Year-long course
(*Placement audition or permission of instructor*)
Advanced Dance meets Mondays from 4:00-5:30pm and Wednesdays from 3:30-5:00pm and Fridays as needed. It is offered to students who have strong technique and experience and/or those who have made significant progress in Intermediate Dance. Advanced Dance functions as both a technical class and a company rehearsal for in-depth choreography to be performed later in the year. This course is designed to develop discipline and performance skills through serious and concentrated study of dance technique in jazz, ballet, and lyrical/contemporary dance styles. This course strongly emphasizes performance and will include performances throughout the year as well as a full-length two-evening production in the spring. Students are required to attend out-of-class rehearsals occasionally in preparation for performances or as needed when working with guest choreographers. Because of the rigorous nature of this company-level class, year-long participation, beginning in the fall, is required. Exceptions will only be considered if a student is currently taking dance outside of school, has extensive prior dance experience, and has received permission from the instructor.

Blue Allegro Grades 9-12 *(By audition or invitation)*
Blue Allegro is the performing company of Advanced Dance, which develops professional approaches to rehearsals and performances. Students work in the corps as well as soloists while being exposed to a variety of styles, choreographers, repertoire, and music. The company attends the annual Independent Dance Network Festival and the Maryland Dance Alliance as well as performing on campus throughout the school year. A student must have reached the advanced level, have extensive prior dance experience, and shows strong leadership qualities.

PUBLIC SPEAKING

Dialogue & Debate Grade 9 non-credit; semester course
(Required of all ninth graders)
This required 9th grade course focuses on two foundational skills: speaking and listening. The “Dialogue” portion of the course emphasizes the skills needed to engage in constructive conversations designed to

build understanding and connection across differences in beliefs, perspectives, and identities. Students will learn how to express themselves and their worldviews---as well as listen to those of others--both authentically and respectfully, in ways that further self-awareness and empathy and support the process of identifying and resolving conflict.

The "Debate" portion of this course emphasizes the art of public speaking, and exposes students to the skills required both to craft and to present a speech. Students will learn how to choose language tailored to audience, purpose, and context, with attention to tone and the fundamentals of argumentation. This course will develop students' oral and performance expression skills through the planning and practice of both extemporaneous and persuasive speaking and build proficiency in skills such as collaboration, reflection, and self-regulation.

This course is part of the broader ninth grade curricular focus on interpersonal skill development, metacognition, and communication.

SCIENCE

The goal of the science department is to have each student become scientifically literate. To that end, all courses are laboratory-oriented and stress the ability of the student to experience opportunities to develop critical thinking skills using the logical, scientific mode of reasoning which will prepare them for future, lifelong learning. It is our hope that each student will emerge with enthusiasm and appreciation for science and its dynamic, changing nature, and with awareness of global concerns and current issues.

Requirements and Recommendations:

- The Science Department recommends the appropriate course for a student.
- All students are required to complete 3 credits of lab-based science courses in the Upper School.
- Students must take Biology, Chemistry and Physics.

Biology Grades 9, 10 1 credit; year course

A study of basic biological principles with an emphasis on the place of humans in the biosphere, the relation of human physiology to medical conditions, and the ethical and social implications of biological decisions. The topics covered include basic chemistry, respiration, photosynthesis, cell structure and function, human anatomy and physiology, genetics, evolution and ecology. Laboratory is an integral part of the course, and provides students the opportunity for hands-on experiences in the field of biology. Beyond mastery of subject matter, the most important goal is to encourage an appreciation for life, a sense of wonder, and an understanding of the complexity and efficiency of living things.

Chemistry Grades 10, 11 1 credit; year course

(Prerequisite: Biology)

Chemistry is an introduction to the chemical and physical properties of matter. Topics including atomic structure, properties of elements and compounds, reactions, the periodic table, chemical thermodynamics, and solution chemistry. Emphasis is placed on development of good qualitative and quantitative skills with less of a focus on the mathematical approach.

Honors Chemistry Grades 10, 11 1 credit; year course

(Prerequisite: Biology. Completion of Geometry recommended)

Chemistry is an introduction to the chemical and physical properties of matter. Topics include atomic structure, properties of elements and compounds, reactions, the periodic table, chemical thermodynamics, solution chemistry, reaction rates, and chemical equilibria. Emphasis is placed on development of good qualitative and quantitative skills. This course is recommended for students interested in entering a competitive college, a science or science-related career, and for those students who plan to take AP Biology or AP Chemistry

Physics Grades 11, 12 1 credit; year course

(Prerequisite: Chemistry and Algebra II or Algebra II concurrently)

This introductory course in physics assumes a background in Algebra and Geometry. Trigonometry is presented and used throughout the course. Topics covered include Newtonian mechanics (kinematics and dynamics), energy, waves, optics, electricity, magnetism, and nuclear particle physics. Laboratory work for introducing and applying concepts is an integral part of the course. Building and computer projects offer opportunities to apply analytical and problem solving skills that are emphasized.

Honors Physics Grades 11, 12 1 credit; year course

(Prerequisite: Honors Precalculus concurrently or recommendation)

Students will gain an understanding of core physics principles and then apply them to problem-solving exercises and experimental investigations. Extensive use of trigonometry and algebra will be used to analyze two-dimensional motion. Topics of study from classical and modern physics include Newtonian mechanics, fluid mechanics and thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. Laboratory work is an integral component of this course. Technology including scientific calculators, probeware, graphing and data analysis software, and physics apparatus is used throughout this course.

Honors Physics with Calculus Grades 11, 12 1 credit; year course

(Prerequisite: AP Calculus AB or AP Calculus BC concurrently. B+ or higher average in previous science and math courses)

In this demanding course, students will gain an understanding of core physics principles and then apply them to problem-solving exercises and experimental investigations using advanced mathematical methods, including calculus. Topics of study from classical and modern physics include Newtonian mechanics, fluid mechanics and thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. Laboratory work is an integral component of this course. Technology including scientific calculators, probeware, graphing and data analysis software, and physics apparatus is used throughout this course.

W **Anatomy and Physiology** Grade 12 1 credit; year course

(Prerequisite: Successful completion of Biology and Chemistry)

Anatomy and Physiology provides students with a comprehensive study of the structure and function of the human body. Through lab exercises, demonstrations, guest speakers, lectures and dissections, students will be able to investigate the systems of the body, learn how the human body works, and gain insight into possible careers in the biomedical field. Topics covered include the circulatory, digestive, nervous, muscular, skeletal, endocrine, immune and integumentary systems, as well as diseases and

disorders pertinent to each system.

W Ecology, Evolutionary Biology, and Behavior Grades 11, 12 1 credit; year course
(Prerequisite: Chemistry)
This course will allow students to discover the behavioral and physiological characteristics of the animals. Students will explore the purpose behind the many curious actions of animals, as well as explore the amazing diversity of life on our planet. The class will employ lecture, lab work and campus field work to better understand the nature of the world around us. Lecture sessions will center on the evolutionary foundations of behavior and morphology, how form relates to function, as well as the fundamentals of ecology and taxonomy. Assessments have a particular focus on application of class material to form hypotheses and design experimental procedures, with the goal of "doing science" rather than just learning about science. Lab and field work will accentuate understanding of class topics and promote a sense of natural wonder.

W AP Biology Grades 11, 12 1 credit; year course
(Prerequisite: Biology and Chemistr, and departmental recommendation)
The course studies the fundamental biological principles. Major topics include cell structure and function, molecular genetics, heredity, cellular energetics, evolutionary biology, diversity of organisms, structure and function of plants and animals, and ecology. Laboratory is an integral part of the course including at least 8 inquiry based labs and preparation for college-level laboratory work. Current events on biological developments supplement the text. The equivalent of a two semester college-level Biology course, AP Biology is designed to prepare students for the AP exam and for further study in science.

W AP Chemistry Grades 11, 12 1 credit; year course
(Prerequisite: Biology, Chemistry and Algebra II and departmental recommendation)
This course will allow students to attain a depth of understanding of fundamentals and competence in dealing with chemical problems. It integrates the three aspects of a college level course: development of theoretical concepts, construction of problem-solving techniques, and participation in a laboratory program. The course will contribute to the development of the students' abilities to think clearly and to express their ideas, mathematically and in writing, with clarity and logic. The equivalent of a two semester college-level Biology course, AP Chemistry is designed to prepare students for the AP exam and for further study in science.

W AP Environmental Science Grade 12 (Grade 11 with permission) 1 credit; year course
(Prerequisite: Biology, Chemistry, Algebra II)
The AP Environmental Science course provides students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. The course will involve ongoing lab inquiry and fieldwork analysis, allowing for a systematic and scientific study of the environment and our role in it. Environmental Science is interdisciplinary; it will embrace a wide variety of topics from different areas of study. The equivalent of an introductory college level Environmental Science course, AP Environmental Science is designed to prepare the student for the AP exam.

W Engineering Design Grades 10, 11, 12 1 credit; year course

The objective of this course is to introduce basic concepts of engineering. This will be a hands-on course where students will work individually and in collaborative teams to creatively solve relevant design challenges using the engineering design process. Students will be exposed to different engineering disciplines and ethics while emphasis will be upon modeling, problem-solving, and communication skills. *Cross listed in Computer/Technology

W **Biochemistry, Microbiology and Public Health Research (Honors) - Small World Initiative**
Grades 11, 12 1 credit; year course
(Prerequisite: departmental recommendation)
The Small World Initiative (SWI) is an independent research class that encourages students to pursue careers in science while using novel crowdsourcing initiatives to address a worldwide public health threat – the diminishing supply of effective antibiotics. Over two thirds of all antibiotics originate from soil bacteria and fungi. Students will be using university-level research techniques over the course of the year to discover and produce new antibiotics. The project entails: isolation and classification of new antibiotic producing bacteria species, extraction and analysis of novel antibiotic compounds and student designed experimentation. Students will enhance their lab experiences by learning about the microbiological world, mechanisms of antibiotic action and the development of antibiotic resistance in the context of basic biochemical processes. Classroom activities include: lab, lecture, student led discussion, lab-meeting style presentation of findings, journal critiques and poster sessions.

W **The Science of Art*** Grades 10, 11, 12 ½ credit; semester course
Art and Science have always been a dynamic duo. Focusing on the science of art production and the scientific skills of investigation and experimentation, students will explore the fascinating territory in which the arts and science mingle. We will touch on each of the three major subjects in science; Chemistry, Biology and Physics and view them through an artistic lens. Using the collection at the Walters Art Museum, we will investigate several collection areas including: antiquities, manuscripts, pottery, textiles and metal. In this course, scientific theories will be presented and students will experiment with art materials to explain and explore those theories. These findings will be documented in a creative journal, which will be one of the main assessments of understanding. In addition, students will create an art piece that interprets one of the scientific theories discussed and will be asked to solve challenge problems that stretch the understanding of both material and theory.
*Cross listed in Visual Art Studio fee: $25.00

W **Women in Science and Engineering Program (WISE)** ½ credit; semesters 1 or 2
Grades 11, 12
(Prerequisites: Chemistry and Algebra II, unless placement warrants an exception; admission requires participation in selection process and recommendation by WISE faculty based upon motivation, maturity, academic strength, and capacity to succeed in program)

WISE is an experiential learning opportunity in which students are assigned to a faculty mentor at Johns Hopkins University and participate in hands-on research in their mentor's lab or research site at Johns Hopkins. WISE emphasizes three key learning areas: WISE students (1) learn about the scientific method applied in real-world science; (2) learn about both a specific area of inquiry and a broad array of disciplines in a major research university; and (3) learn how to be a contributing member of a research team. WISE students fulfill academic assignments, maintain an electronic portfolio, prepare and deliver a

final presentation on their work at GFS and at JHU, and participate in an annual poster session at GFS.

Placements are available with faculty in JHU's Whiting School of Engineering, Krieger School of Arts and Sciences, Bloomberg School of Public Health, and School of Medicine. Customized placements in other JHU arenas may be available. Participation is typically for 1st or 2nd semester, although a student may continue beyond this time period based on her interest and her mentor's availability. WISE orientation and research seminars prepare and support WISE students for their first month in the program, prior to beginning research, and once a cycle after work at JHU begins.

There is an additional tuition fee for participation. WISE participation does not require residency on campus; WISE students interested in boarding explore the option through the Residential Life office.

Complete information on the program is available on the GFS website and from the Director of the James Center/Dean of Special Programs, who can assist students with specific scheduling issues, including 3-season athletes and a few others who may need a special summer WISE placement.

STUDENT SUPPORT

Academic Resources Course (ARC) Grade 9 non-credit; year course
This course, which meets once per cycle, offers academic support to students who are new to the Upper School and have been identified as needing support. Basic "survival skills" will be taught, including organization, time management, reading comprehension, note-taking, test-taking strategies, and exam preparation. This interdisciplinary approach to the school curriculum will reinforce what is happening in the classroom, whether it is writing the expository essay for English, reading primary sources for a history class, or memorizing vocabulary and grammar in a foreign language.

ONLINE COURSES

Online providers, such as One Schoolhouse/Online School for Girls (of which Garrison Forest School is an affiliate member), are an increasingly prevalent form of education. GFS views use of online courses as an important enhancement to the learning experience of its students in certain situations. Circumstances in which online coursework may be pursued in addition to, or instead of, a classroom course, include:

- To address scheduling needs created by enrollment in a special program, such as WISE;
- To address sequence needs, when a student has moved beyond the highest level course available at GFS;
- To address a compelling and demonstrated interest in taking a course not offered by GFS, as in approved independent study.

In the Upper School, students may request enrollment in an online course or be recommended for one by their advisor. Advisors may suggest consideration of an online option for a student to the Upper School Dean of Academic Development, who will review requests with the Student Support Coordinator, the Head of Upper School, relevant Department Chairs and others to assess whether to approve it.

Considerations include:

- The educational needs of the student;
- The availability of classroom course options;
- The availability of appropriate learning support for the student;
- The student's readiness for an independent learning experience;
- The course's comparability in content and rigor to GFS courses.

ONE SCHOOLHOUSE
partners in innovation

In partnership with One Schoolhouse/Online School for Girls, Garrison Forest School offers the approved courses listed below. All OSG course enrollments must be approved by the Dean of Academic Development and relevant Department Chair.

AP Art History Grades 11, 12 elective (by recommendation of the English and History Departments) 1 credit, year course
Prerequisite: *Successful completion of one year of high school history*
Students enrolled in the AP® Art History course examine and critically analyze major forms of artistic expression from a variety of cultures spanning 32,000 years of art. Beginning with global prehistory and ending with global contemporary art, students consider influential forces like patronage, politics, class, belief, gender, and ethnicity in their analysis of art forms. Students become active participants in the global art world, engaging with its forms and content, as they experience, research, discuss, read, and write about art, artists, art making, and responses to and interpretations of art. By investigating a specific image set of 250 works of art characterized by diverse artistic traditions from prehistory to the present, the course fosters an in-depth, holistic understanding of the history of art from a global perspective. Students may select the AP® or non-AP® track in this course. AP® students are expected to delve deeper into the topics, take AP®-style assessments, and prepare for the AP® exam in the spring.

AP Computer Science A Grades 10, 11, 12 elective 1 credit, year course
Prerequisite: *Successful completion of an OSG computer programming course or permission from the OSG administration.*
The AP Computer Science course will introduce the key concepts and techniques of object-oriented programming in Java. The analytic, critical-thinking, and problem-solving skills developed in this course will transfer to programming in other languages on a variety of platforms. This course is designed with the idea that programming should be fun, engaging, and intuitive. Students will work creatively and collaboratively with their classmates and develop a solid foundation from which to launch into a wide range of computer science areas. In today's world, having an understanding of programming concepts as well as the ability to approach problems with a "programmer's eye" have become essential skills for students and professionals. Students taking this course will be well prepared for the AP® Computer Science A Exam in May. *May be offered in-school or online depending on enrollment.

AP Macroeconomics Grades 11, 12 elective 1 credit, year course

Prerequisite: *Successful completion of Algebra II*

AP Macroeconomics will introduce students to major economic issues such as basic market analysis, the causes of the cycle of economic growth and recession, the problems of inflation and unemployment, the causes and consequences of federal budget deficits, and the causes and effects of international trade imbalances and currency fluctuations. The impact of fiscal and monetary policies are analyzed as are the debates surrounding the proper implementation of each. This course will involve extensive reading, problem-solving exercises, online discussions, quizzes and tests, and research and writing about contemporary macroeconomic issues. Strong reading, algebra, and analytical skills are necessary for success, as is strong motivation. AP Macroeconomics will prepare students to become informed and thoughtful and will thoroughly prepare students to take the Advanced Placement exam in the spring. AP® Macroeconomics is recommended for juniors and seniors.

AP Microeconomics Grades 11, 12 elective 1 credit, year course

Prerequisite: *Successful completion of Algebra II*

AP Microeconomics is a course that examines how individuals (such as consumers and producers) make decisions and how these decisions affect our everyday lives. Topics discussed include the forces of supply and demand, costs of production, consumer choice, and behavioral economics, amongst others. Throughout the course, students will examine various models that are used to conceptualize how our economy operates and will explore the role that government plays in a given economy. As an online, college-level course, significant emphasis is placed on independent work and individual accountability. Students will complete collaborative projects, group discussions, problem sets, quizzes, and tests. The curriculum is developed to prepare students for the AP Microeconomics examination in May. Strong mathematical reasoning skills and an interest in finance, business, or government will aid students in this course. AP Microeconomics is recommended for juniors and seniors.

AP US Government and Politics and AP® Comparative Government and Politics
Grade 12 elective 1 credit, year course

Prerequisite: *Successful completion of one year of high school history*

AP Government and Politics is a yearlong course that provides students with an in-depth understanding of the American government as well as various political systems around the world. The fall semester covers AP US Government and Politics. Students will learn how the American government was founded, how the electoral process works, who votes and why, and how the various branches function. Special attention will be given to how the different agencies within the government interact, and how these agencies and their policies affect the daily lives of Americans. The spring semester covers AP Comparative Government and Politics, which takes an in-depth look at six different states: Iran, Nigeria, China, Russia, Mexico, and Great Britain. In addition to learning how to conduct proper comparative studies, students will analyze how these different states function, both as independent states and as part of the global community. Upon completion of this course, students will have a thorough understanding of some of the major political systems across the world, which will make it easier to comprehend how our world evolves and functions. Students will be prepared for both AP exams.

AP Music Theory 1 credit, year course

Prerequisite: *Ability to read at least one clef of music and proficiency in an instrument or voice*

AP Music Theory introduces advanced concepts of music theory to students. The aim of this course is to

improve students' performance, aural, analytical, and composition skills. AP® Music Theory is an intensive, fast-paced course that touches on aspects of melody, harmony, texture, form, musical analysis, and composition. This course also includes an aural section of sight-singing, melodic and harmonic dictation, and listening examples. Each student composes and perform original compositions, both as an individual and in a group setting. All students enrolled in this course take the Advanced Placement exam in the spring. Yet AP® Music Theory is not just about the exam; students experience growth in their performance skills and all around musicianship. This is a crucial course for anyone looking to pursue music professionally or for anyone who wants to pursue their passion in music.

Intro. To Computer Programming: Summer Prep Course for AP Computer Science
Prerequisite: *None*
Offered: Online School for Girls, Summer (June 11 – August 3, 2018)
The goal of this course is to create an environment where students develop the skills to express their creativity in various programming languages. The course will start by introducing students to basic programming constructs and techniques using a simple but powerful drag-and-drop programming language in an animated environment. Students will then learn to create simple apps, explore a Java-like language that incorporates an electronic sketchbook with graphics and animation, and finally move on to object-oriented programming with 3D graphics. Throughout the course, students will conduct research and collaboratively investigate current issues surrounding computer science, specifically focusing on recent events involving computer science and the issues surrounding women in technology. By the end of the course, students will understand how relevant and important computer programming is in the world around them. This course prepares students for all advanced One Schoolhouse computer science courses.

Students participating in summer courses should plan to devote 25-30 hours per week for eight weeks to their course. Students will receive grades and comments in these classes, which are the equivalent of year-long, high-school level courses. Because of the pacing and intensity of summer courses, there is little flexibility; students must be available and have internet access for all eight weeks of the course. For more information about summer courses and policies please see the School's website and the OSG Summer Handbook.

ACADEMIC CREDIT FOR COURSES AND SPECIAL PROGRAMS OUTSIDE OF GFS

In general, GFS does not confer credit for courses taken elsewhere but may take into account that work for purposes of placement and attach the transcript from the sponsoring institution. The Head of Upper School, in collaboration with the College Counselor, relevant Department Chair, and Dean of Academic Development, will determine whether such a course can be used to fulfill departmental requirements for graduation or whether it can be used to fulfill overall course load requirements.

Permission from the Head of Upper School and the relevant Department Chair is needed in order for a student to receive credit for a course or program other than those offered during the regular school day and year (such as for an approved semester away program). Credit is granted only on an individual basis, and requests for such credit must be made in advance of enrollment in such a course.